Service-Manual

VCR
1994

NOKIA

VCR 3785 NE/SE
VCR 3785 CE
VCR 3785 UK
VCR 3785 NL

Circuit diagrams, P.C.B., spare parts list, electrical alignment.

Mechanical adjustments, please, refer to following page.

Safety Component!
⚠ This symbol identifies in the circuit diagrams all safety critical parts. Replace only with specified part numbers.

Service and repair work to be performed only in accordance with existing safety regulations!

NOKIA
CONNECTING PEOPLE

6611 9007

Liste der Service - Manuale **List of Service Manuals** **Liste des manuals** **Modell** **Model** **Modèle**	**Elektrischer Abgleich** **Schaltbilder, Leiterplatten,** **Ersatzteile-Liste** **Electrical alignment** **Circ. diagr., P.C.B.,** **Spare parts list** **Alignement,** **Schémas circ. imprimès,** **liste des pièces détachées** **No.**	**Mechanik-Justagen** **Mechanical adjustments** **Mécanique ajustages** **No.**
NOKIA VCR 3745 SE NOKIA VCR 3745 UK NOKIA VCR 3745 NE NOKIA VCR 3745 BN NOKIA VCR 3745 CE	6611 90 03	6611 90 10 **Note:** 6611 90 10 is only supplement for '94 series. Basic manual is 6611 77 06 (1990).
SALORA VCR 835 NE/IT LUXOR VCR 4745 NE	6611 90 04	
SALORA VCR 635 NE/IT LUXOR VCR 4715 NE	6611 90 05	
NOKIA VCR 3715 CE NOKIA VCR 3715 SE NOKIA VCR 3715 NE NOKIA VCR 3715 BN NOKIA VCR 3725 UK NOKIA VCR 3725 IR	6611 90 06	
NOKIA VCR 3785 NE/SE NOKIA VCR 3785 CE NOKIA VCR 3785 UK NOKIA VCR 3785 NL	6611 90 07	
SALORA VCR 935 NE LUXOR VCR 4785 NE	6611 90 08	
NOKIA VCR 3715 ES	6611 90 09	

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CIRCUIT DIAGRAMS (Refer to the separate volume)

SELF-DIAGNOSIS DISPLAY

This unit displays the results of the self-diagnosis it carries out in two digits on the front panel indicator when problems occur. Although these digits will only roughly tell you what kind of problems have occurred, use them when servicing the unit.

1. Displaying the Self-Diagnosis Results

- Press the STOP button for about 10 seconds continuously. Two digits (see below) showing the results of the self-diagnosis will be displayed for three seconds at the hours part of the timer. All other parts of the timer will go off. The time will automatically return after the three seconds.
- If no mechanism unit problems have occurred up to now, "**00**" will be displayed.

Self-diagnosis digits

2. Self-Diagnosis Results

No.	Problem	Main Possible Cause	Mechanism Operations and State After Occurrence
01	The cylinder motor does not rotate.	• The cylinder motor is faulty. • The control of the cylinder motor is faulty. • The tape winds around the cylinder.	Shifts to the STOP mode.
02	The take-up reel does not rotate.	• The take-up reel is caught. • The belt is faulty. • The take-up torque has decreased.	Shifts to the STOP mode.
03	The capstan motor does not rotate.	• The capstan motor is faulty. • The control of the capstan motor is faulty.	Shifts to the STOP mode.
04	The tape cannot be loaded with the cassette inserted. (But unloading can be performed.)	• Error in the operations of the tape loading mechanism. • Foreign particles in the tape loading mechanism. • The tape end sensor is faulty. • The reel brake of the tape cassette has not been released.	Unloads, shifts to the INITIAL mode, and the power goes off.
05	Tape loading and unloading cannot be performed with the cassette inserted.	• The tape guide is caught. • The loading motor is faulty. • The control of the loading motor is faulty.	The power is forcibly turned off with the mechanism at its current position.
06	Front unloading cannot be performed when ejecting the cassette. (Front loading can be performed.)	• The cassette holder mechanism is faulty. • The front door is caught.	Front loads and shifts to the STOP or INITIAL mode. When the power switch is turned on before eject operations: Shifts to the STOP mode. When the power switch is turned off before eject operations: Shifts to the INITIAL mode and the power goes off.
07	Front loading and front unloading cannot be performed when ejecting the cassette.	• The tape cassette is caught in the cassette holder mechanism. • The gears of the front loading drive mechanism have not engaged properly.	The power is forcibly turned off with the mechanism at its current position.
08	The mechanism becomes 1 (BRAKE) while moving from 2 (STOP, FF/REW), 3(STILL), 4 (PLAY), and to 5 (IDLER).	• The mechanism mode switch contact is faulty.	The power is forcibly turned off with the mechanism at its current position.
09	The mechanism becomes 7 (INITIAL) while moving from 1 (BRAKE), 2 (STOP, FF/REW), 3(STILL), 4 (PLAY), and to 5 (IDLER).	• The mechanism mode switch contact is faulty.	Carries out tape take-up operations, shifts to the INITIAL mode, and the power goes off.

Note: For details of mechanism operations corresponding to the mechanism positions of the self-diagnosis numbers 08 and 09 above, refer to the separate volume on the mechanism manual. These manual reference numbers are shown in the cover.

1. DISASSEMBLY

1-1. REMOVAL OF CABINET, MECHANISM UNIT AND MAIN BOARD

REMOVING THE CABINET PARTS (Fig. 1.1.1)

1. Remove the cabinet and bottom cover by removing the four screws (A) and five screws (B).
2. Remove the front panel by removing the locks of the clamps (C) using a screwdriver, etc. and slightly rotating the bottom part in the direction of the arrow.

Notes:
- Electrical adjustments for the this model can be performed with only the cabinet removed.
- When replacing the bottom cover, do not tighten the screws (B) too much. Excess tightness may damage the screw taps on the chassis.

REMOVING THE MECHANISM MAIN UNIT (Fig. 1.1.2)

After removing the cabinet parts:

1. Remove the two screws (D), and then remove the bracket.
2. Remove a red screw (E), and then remove the AD-1 PWB by removing the locks of two clamps (F) of the holder. It is not necessary to remove the cables connected between the AD-1 PWB and CP-1 PWB assembly.
3. Disconnect 22-wire flat cable from the MC-2 PWB, and then 6-pin connector from the ACE heads.
4. Remove the flat cable from the cylinder assembly, then the two screws (G), and finally the VP-1 PWB assembly. It is not necessary to remove the two party cables connected between the VP-1 PWB assembly and CP-1 PWB assembly.
5. Remove the mechanism main unit by removing the two screws (H) and two screws (J).
   Remove, as well, the two screws (K) at the cassette tray side while pressing the tray lock lever as shown in the enlarged view and pushing the cassette tray to the position where the two screw (K) appear.

REMOVING THE CP-1 PWB ASSEMBLY (Fig. 1.1.3)

After removing the cabinet parts and mechanism unit:

1. Pull out the TM-1 PWB assembly while pressing and spreading out the four clamps (L) as shown by the arrows.
2. Remove the holder set to the opening of the chassis, while pressing the clamp in the direction of the arrow.
3. Remove two red screws (M) and a screw (N). Next, remove the CP-1 PWB assembly by lifting it straight up while pressing and spreading out the two clamps (O) as shown by the arrows.

M-TK4H/EXIT

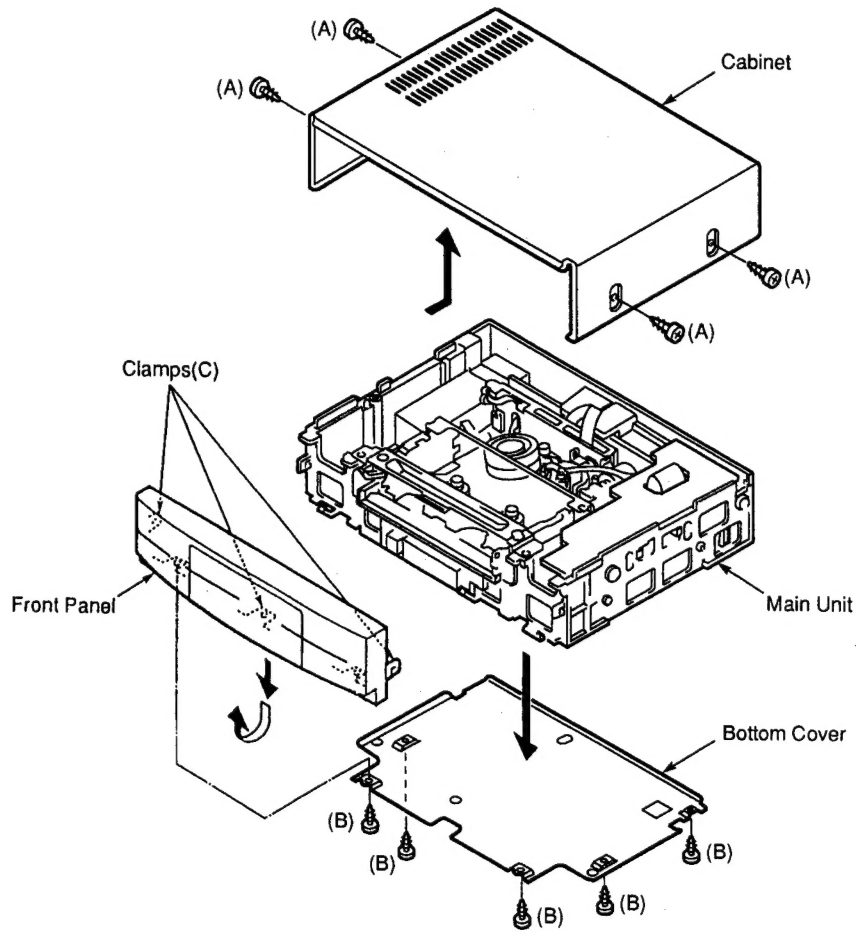


Fig. 1.1.1

M-TK4H/E-2

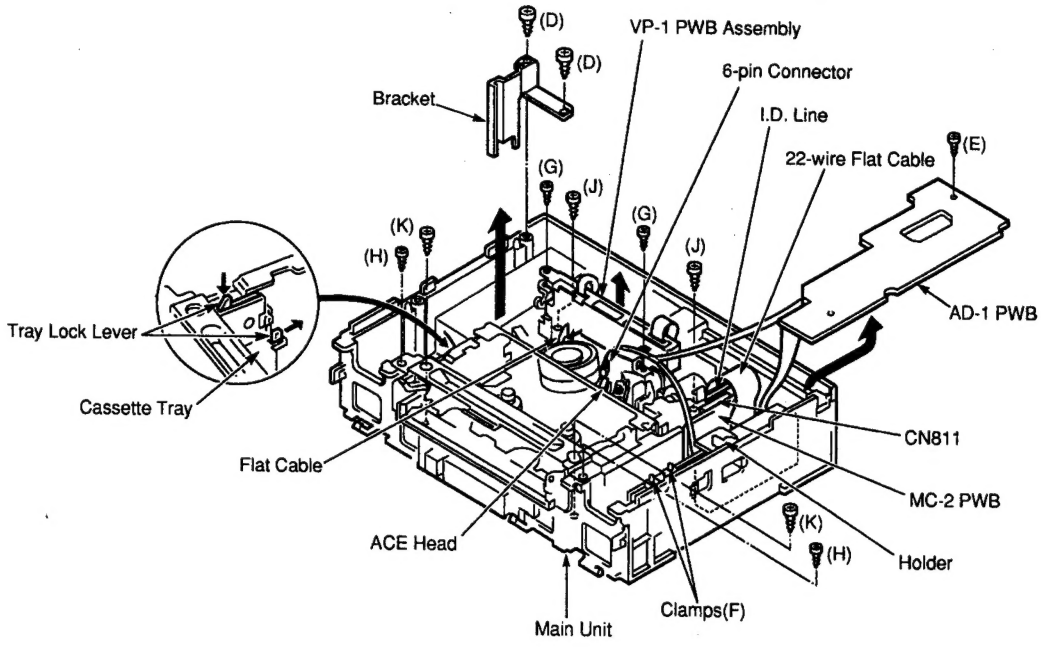


Fig. 1.1.2

M-TK4H/E-3

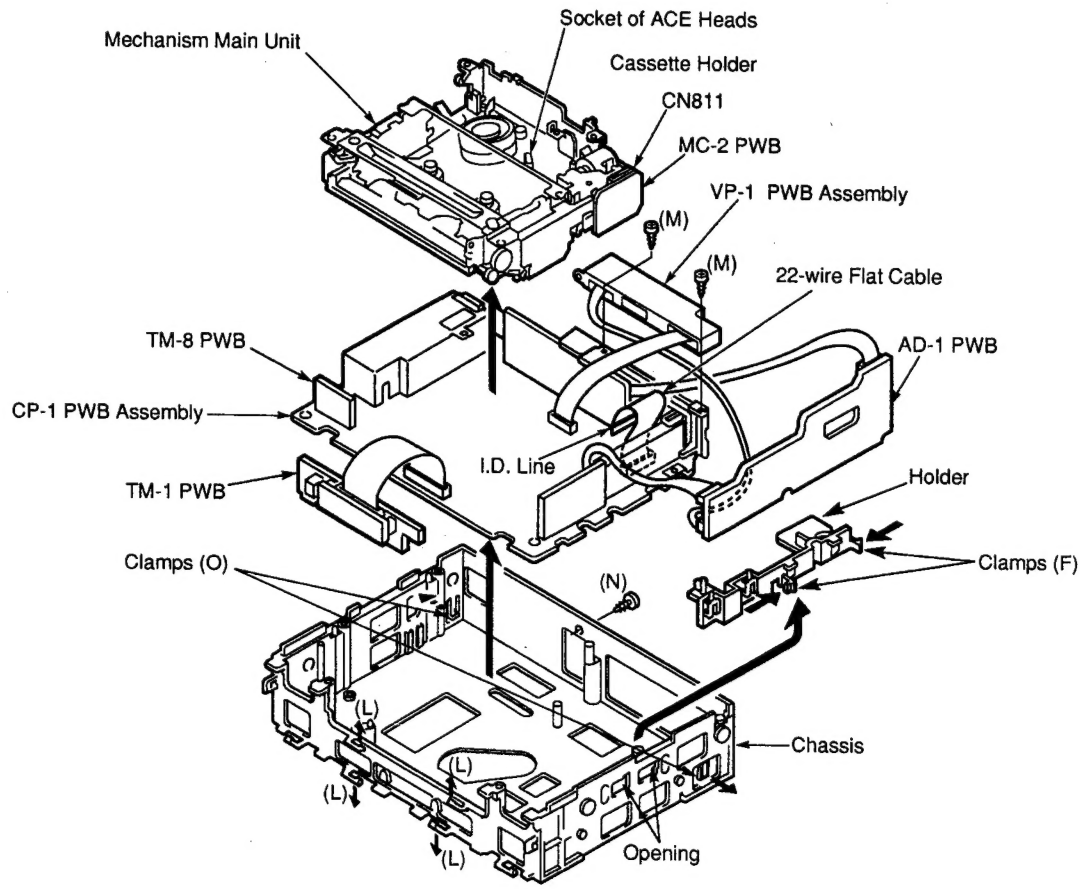


Fig. 1.1.3

TEMPORARILY SETTING UP AND CONNECTING MAIN PWB ASSEMBLY

The following is an example of how to place and connect the main PWB not requiring a jig, when repairing the CP-1 PWB assembly (Fig. 1.1.4)

1. Place the mechanism main unit at the fixed position on the chassis.
2. Insert the VP-1 PWB assembly at the fixed position of the mechanism unit and connect the flat cable of the cylinder assembly.
3. Connect 22-wire flat cable to the MC-2 PWB , and 6-pin connector to the socket of the ACE heads.
4. Place the CP-1 PWB assembly above the mechanism main unit along the cassette holder. Insert the tip (P) of the terminal board into the opening (Q) at the side of the chassis, as shown in the enlarge view.

M-TK4H/E-4

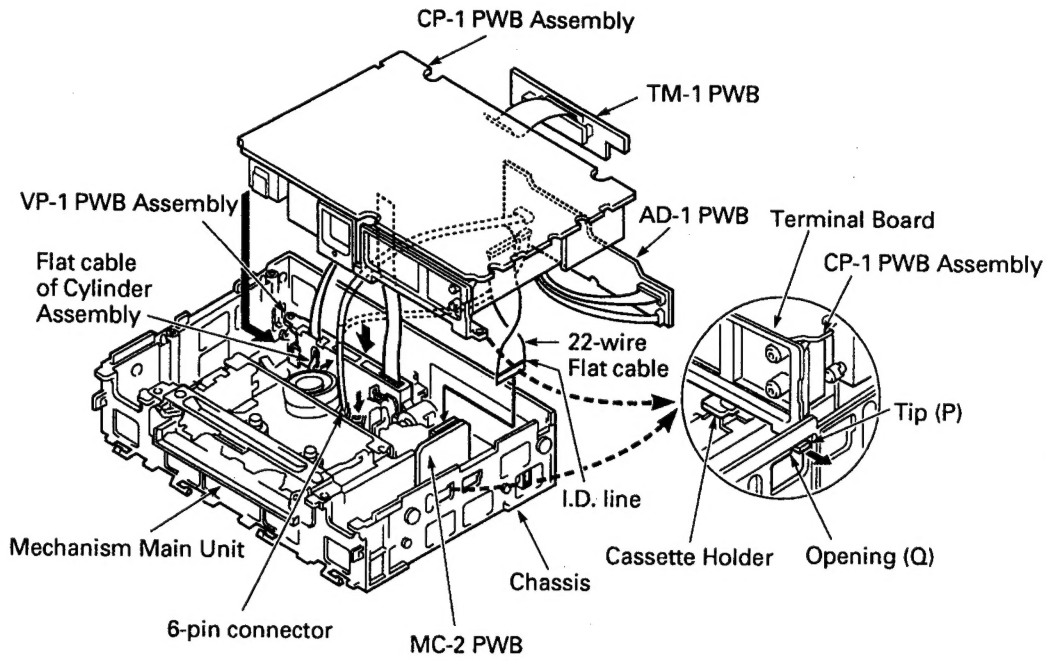


Fig. 1.1.4

1-2. MAIN CIRCUIT BOARD

L-TK4H/EXIT

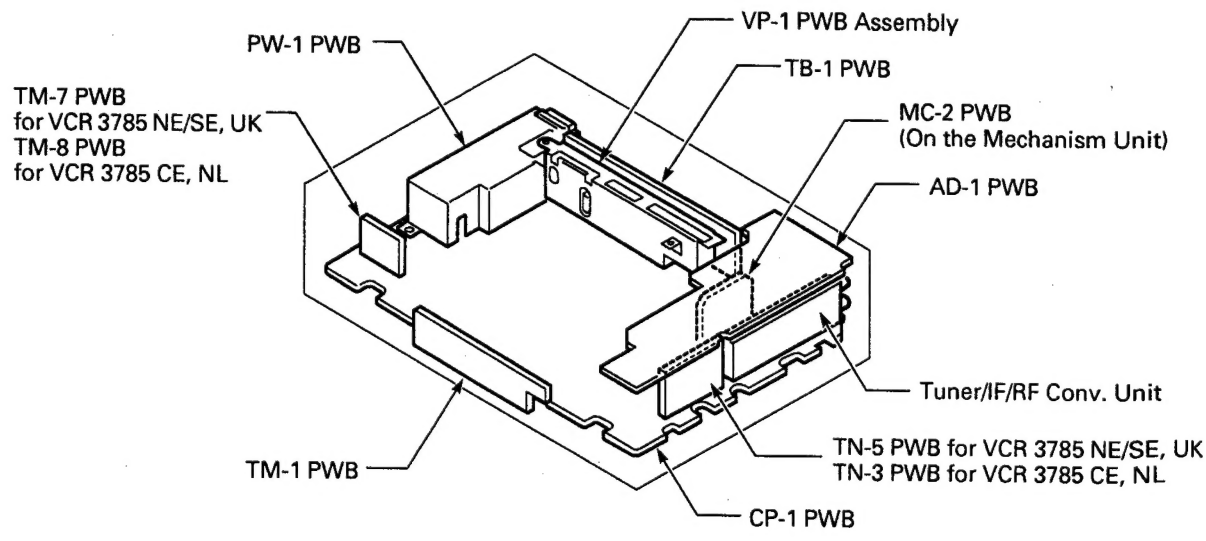


Fig. 1.2.1

2. ELECTRICAL ADJUSTMENT

PREPARATION

This VCR need 3 basic presetting by using the menus displayed on-screen.
After all connection have been made, then follow steps 1 to 3 to preset the VCR.
The 3 presetting steps will be displayed in sequence on TV screen. The setting are entered with the remote control.

Turn on the VCR

1. Adjusting the TV receiver to the video channel: The WELCOME screen will appear. When the video channel has been preset, press the OK button on the remote control.
2. Language selection: Select the desired language, then press the OK button.
3. Tuning control adjustments: When the channel position has been preset, press the MENU/TV button.
   When steps 1 to 3 have been finish, ready to operate the all operating mode.

2-1. SERVO CIRCUIT ADJUSTMENT

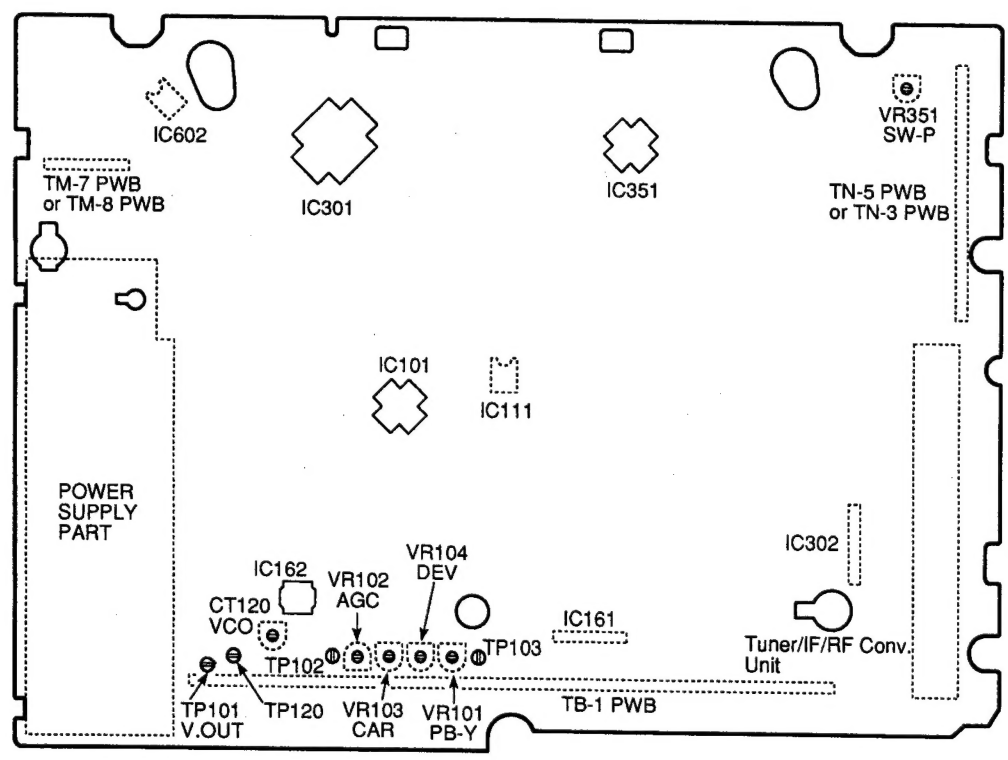
- These adjustments should be carried out upon completion of the tape transport adjustments.
- If the tape transport adjustments (except the tilt adjustment) are carried out after these adjustments, follow the procedures again in Section 2-1-3. SWITCHING POSITION ADJ.
- When a cassette tape is loaded, auto-tracking will be set immediately after starting the first playback. As this will deviate the tracking center set, be sure to press the channel buttons (△) or (▽) once directly after starting playback to prevent auto-tracking from being set.

2-1-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Oscilloscope	Vertical sensitivity: 5 mV/DIV, external trigger Band width: more than 10 MHz
Alignment Tape	VHJ-0009 or VHJ-0023: SP mode, monoscope, 6 KHz
Blank Tape	VHS-type cassette tape
Monitor TV	

2-1-2. LOCATION OF ADJUSTMENT POINTS

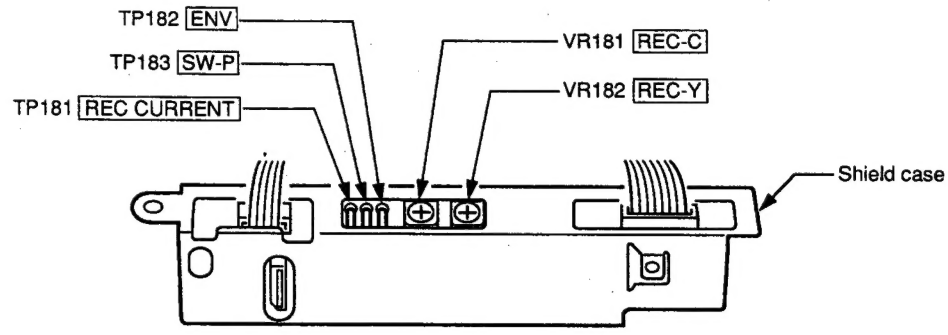
P1B24300B-S1



CP-1 PWB (FOIL SIDE)

Fig. 2.1.1

P1B25800B-S1



VP-1 PWB Assembly

Fig. 2.1.2

Note:

- Self-recording means "Record any broadcasting or video signal and play back the just-recorded portion".

2-1-3. SWITCHING POSITION ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101 (VIDEO OUT) TP183 (SW-P)	Oscilloscope	PLAY mode Alignment tape (VHJ-0009 or VHJ-0023)

ADJ. Location	ADJ. Value
VR351 (SW-P)	6.5 H ± 0.5 H

1. Set the tracking control position to the center by pressing CHANNEL buttons (△) and (▽) simultaneously. (Tracking center position is displayed on the indicator panel as shown "T –:– ")
2. Adjust VR351 (SW-P) so that the width "T" becomes **6.5 H ± 0.5 H** as shown in Fig. 2.1.3.

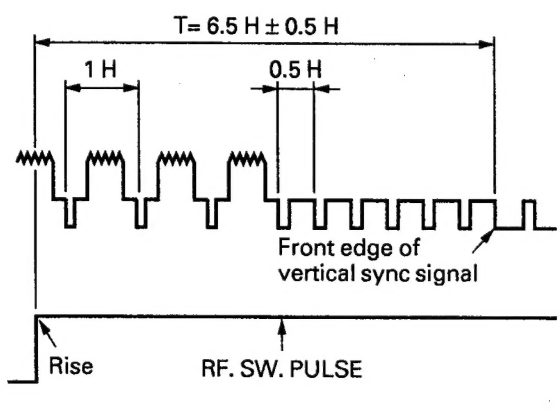


Fig. 2.1.3

2-1-4. SLOW TRACKING ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
Picture of monitor TV	Color bar generator or Broadcasting monitor	Self-recording (SP mode) SLOW mode Blank tape
		Self-recording (LP mode) SLOW mode Blank tape

ADJ. Location	ADJ. Value
CHANNEL (△) button CHANNEL (▽) button	—

1. Set the tracking control to the center position by pressing CHANNEL buttons (△) and (▽) simultaneously. (Tracking center position is displayed on the indicator panel as shown "T –:– ")
2. Play back the self-recoreded portion and set the VCR in the SLOW mode with the remote control unit.
3. Confirm that there is no noise on the slow playback display.
4. Press the CHANNEL button (△) about three times and check that noise dose not appear at the upper part of the display.
5 Adjust the tracking control to the center again.
6. Press the CHANNEL button (▽) the same number of times as in the step 4 (about three times) and check that noise dose not appear at the lower part of the display.

Notes:

- CHANNEL button also servers as TRACKING button.
- When the CHANNEL button is released, after a few seconds, the display on the indicator is turned to time display.

2-2. VIDEO CIRCUIT ADJUSTMENT

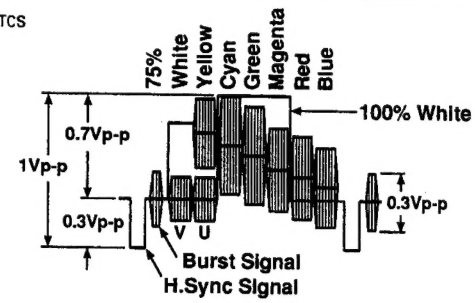
- Before making the following adjustments, Section 2-1. SERVO CIRCUIT ADJUSTMENT should be completed.
- Use the relay jig to provide simple adjustment of the VP-1 PWB assembly.

2-2-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Color Bar Signal Generator	PAL Color bar signel with 100% white level (EBU color bar signel)
Oscilloscope	Vertical sensitivity: 5 mV/DIV, external trigger Band width: more than 10 MHz
Digital Voltmeter	DC range
Alignment Tape	VHJ-0008 or VHJ-0023: SP mode, color bar, 1kHz (Color bar signal waveform is described below. Refer to Fig. 2.2.1)
Blank Tape	VHS-type cassette tape
Oscilloscope Probe	Input capacity: less than 25 pF (10:1) less than 40 pF (1:1) Covering frequency: DC ~ 40 MHz (10:1) DC ~ 30 MHz (1:1)
Frequency Counter	8 significant digits
Adjustment Relay Jig	VHJ-0067: 12-wire flat cable for VP-1 PWB Assembly

ALIGNMENT TAPE COLOR BAR SIGNAL

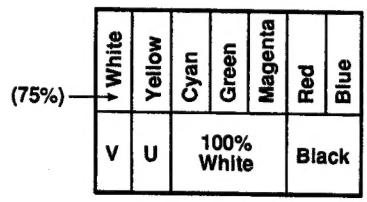
WPV-TCS



COLOR BAR SIGNAL WAVEFORM (VHJ-0008)

Fig. 2.2.1

WPV-TCP



COLOR BAR PATTERN (VHJ-0008) ON MONITOR TV

Fig. 2.2.2

2-2-2. ADJUSTMENT RELAY JIG

Connect the flat cable end from the cylinder assembly to the VP-1 PWB assembly using the relay jig to provide simple repairing and adjustment of the VP-1 PWB assembly, as shown in Fig. 2.2.3. Further, when adjusting the VP-1 PWB assembly, be sure to make contact an end of shield case with bracket of the VP-1 PWB assembly to maintain the shield effect. If the VP-1 PWB assembly does not contact, there is insufficient ground and no proper play back image can be obtained.

WPV-TK4H/E

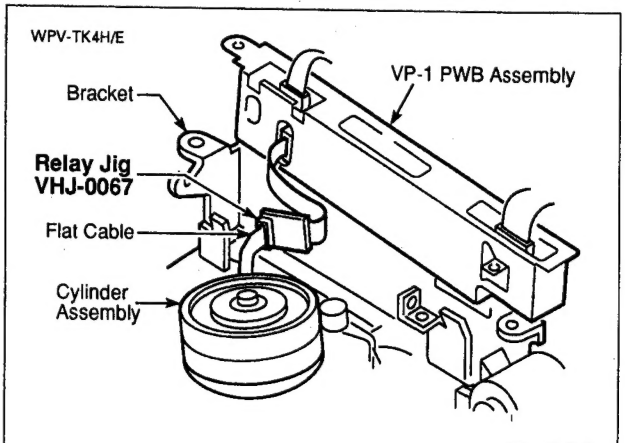
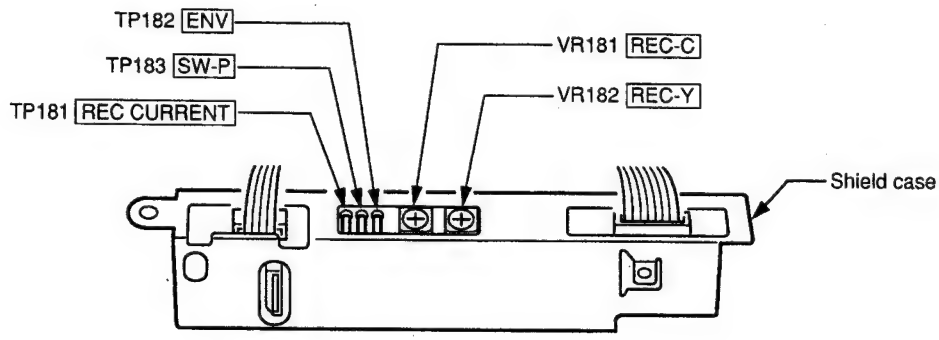


Fig. 2.2.3

2-2-3. LOCATION OF ADJUSTMENT POINTS

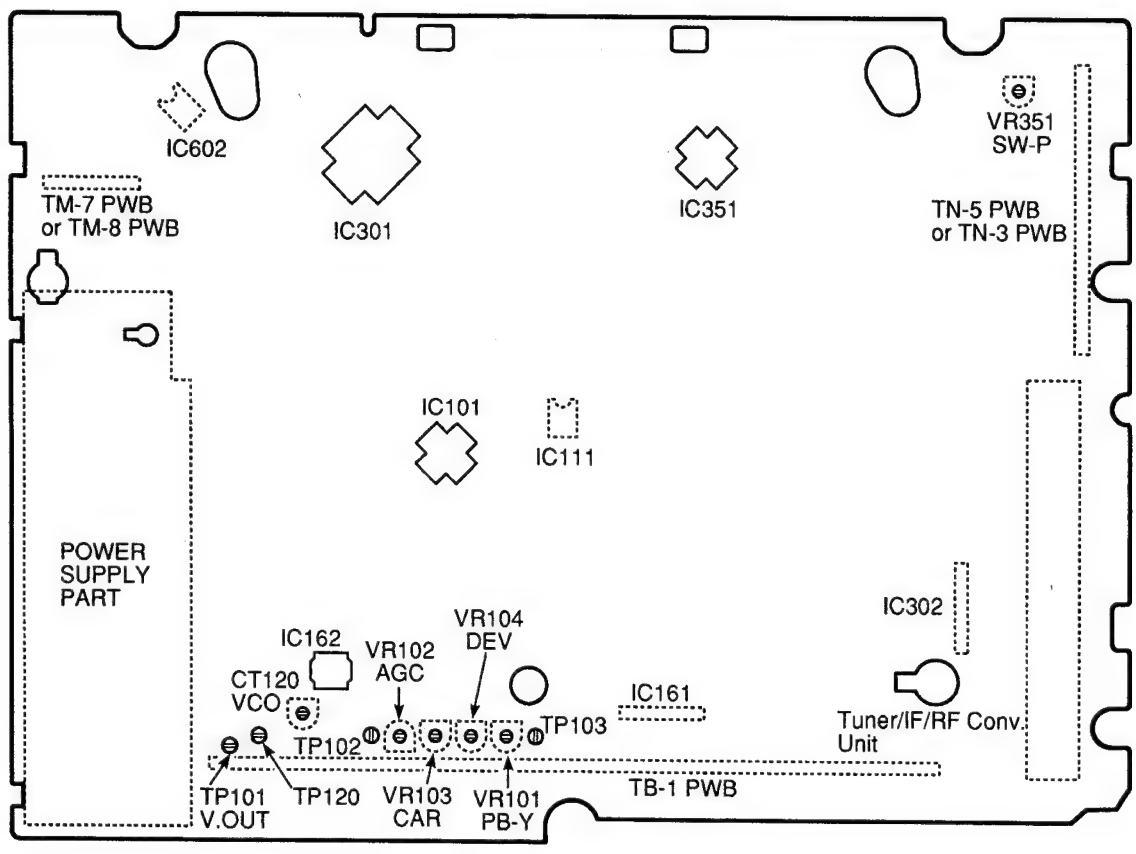
P1B25800B-V1



VP-1 PWB Assembly

Fig. 2.2.4

P1B24300B-V1



CP-1 PWB (FOIL SIDE)

Fig. 2.2.5

Notes:

- Self-recording means "Record the video signal and play back the just-recorded portion".
- Connect the monitor TV to the VIDEO OUTPUT terminal, before making following adjustments.
- ASO HIGH button to the OFF position.

2-2-4. AGC LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP102	Color bar generator Oscilloscope (10:1 probe)	E-E mode

ADJ. Location	ADJ. Value
VR102 (AGC)	0.43 Vp-p ± 0.01 Vp-p

1. Connect the color bar generator to the VIDEO INPUT terminal.
2. Adjust VR102 (AGC) for **0.43 Vp-p ± 0.01 Vp-p** as shown in Fig. 2.2.6.

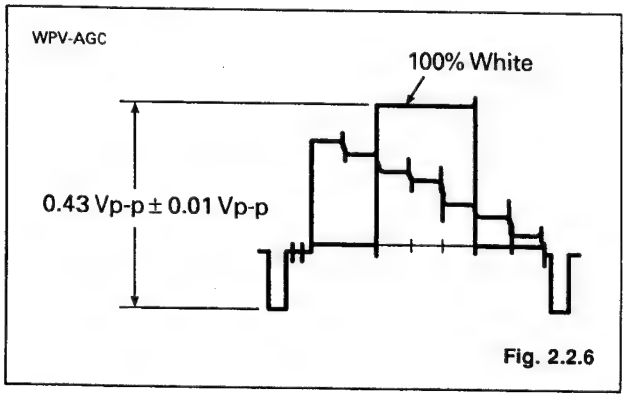


Fig. 2.2.6

2-2-5. PB-Y LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101	Oscilloscope (10:1 probe)	PLAY (SP) mode Alignment tape (VHJ-0008 or VHJ-0023)

ADJ. Location	ADJ. Value
VR101 (PB-Y)	1 Vp-p ± 0.05 Vp-p

1. Terminate the VIDEO OUTPUT terminal with a 75Ω resistor.
2. Adjust VR101 (PB-Y) for the video luminance signal level of **1 Vp-p ± 0.05 Vp-p**. (Refer to Fig. 2.2.7)

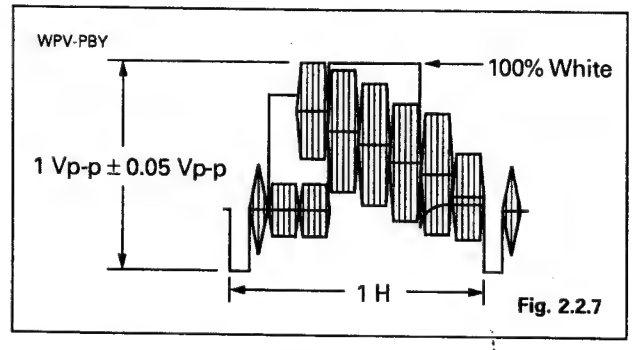


Fig. 2.2.7

2-2-6. CARRIER SET ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP103	Color bar generator Frequency counter	REC (SP) mode

ADJ. Location	ADJ. Value
VR103 (CAR)	3.83 MHz ± 0.05 MHz

1. Connect the color bar generator to the VIDEO INPUT terminal.
2. After removing the first color bar signal input from the video input terminal, immediately adjust VR103 (CAR) so that the frequency becomes **3.83MHz ± 0.05 MHz**.

2-2-7. DEVIATION ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101	Color bar generator Oscilloscope (10:1 probe)	Self-recording (SP) mode Blank tape

ADJ. Location	ADJ. Value
VR104 (DEV)	1 Vp-p ± 0.05 Vp-p

1. Record the color bar signal on the blank tape.
2. Play back of the just-recorded portion.
3. Adjust VR104 (DEV) for **1 Vp-p ± 0.05 Vp-p** as shown in Fig. 2.2.8.
4. If the adjustment value is not satisfactory, adjust VR 104 (DEV) and repeat steps 2 to 3.

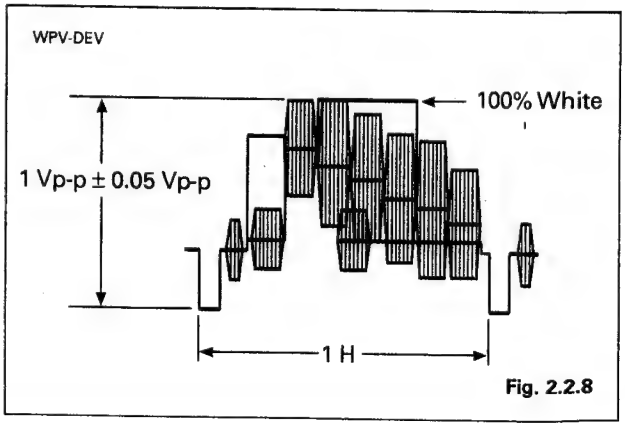


Fig. 2.2.8

2-2-8. C REC CURRENT ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP181 (on VP-1 PWB)	Color bar generator Oscilloscope (1:1 probe)	REC (SP) mode Blank tape

ADJ. Location	ADJ. Value
VR181 (REC-C)	150 mVp-p ± 5 mVp-p

1. Connect the ground of the oscilloscope to the shield case of the VP-1 PWB assembly.
2. Adjust VR182 (REC-Y) for the minimum video luminance signal level.
3. Adjust VR181 (REC-C) so that the video chrominance signal level is **150 mVp-p ± 5 mVp-p.** (Refer to Fig. 2.2.9)

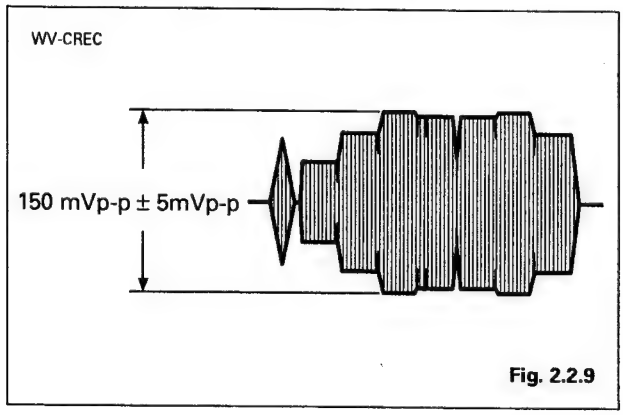


Fig. 2.2.9

2-2-9. Y REC CURRENT ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP181 (on VP-1 PWB)	Color bar generator Oscilloscope (1:1 probe)	REC (SP) mode Blank tape

ADJ. Location	ADJ. Value
VR182 (REC-Y)	470 mVp-p ± 10 mVp-p

1. Connect the ground of the oscilloscope to the shield case of the VP-1 PWB assembly.
2. Adjust VR182 (REC-Y) so that the video luminance signal level at the sync tip is **470 mVp-p ± 10 mVp-p.** (Refer to Fig. 2.2.10)

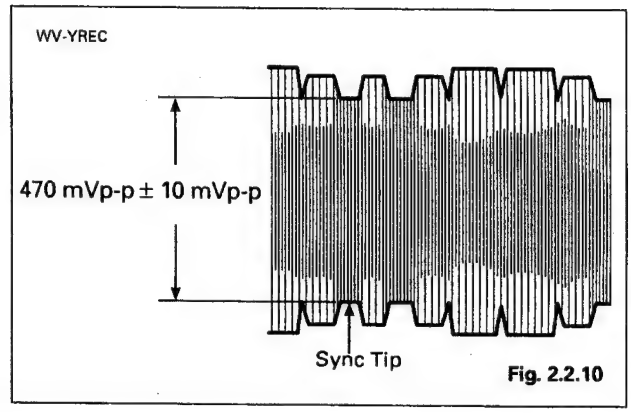


Fig. 2.2.10

2-2-10. VCO (on screen assist) ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP120	Color bar generator Digital voltmeter	E-E mode

ADJ. Location	ADJ. Value
CT120 (VCO)	2.5 V ± 0.3 V

1. Connect the digital voltmeter (DC range) to TP120 and GND.
2. Adjust CT120 (VCO) so that the voltage is **2.5 V ± 0.3 V.**

2-3. AUDIO CIRCUIT ADJUSTMENT

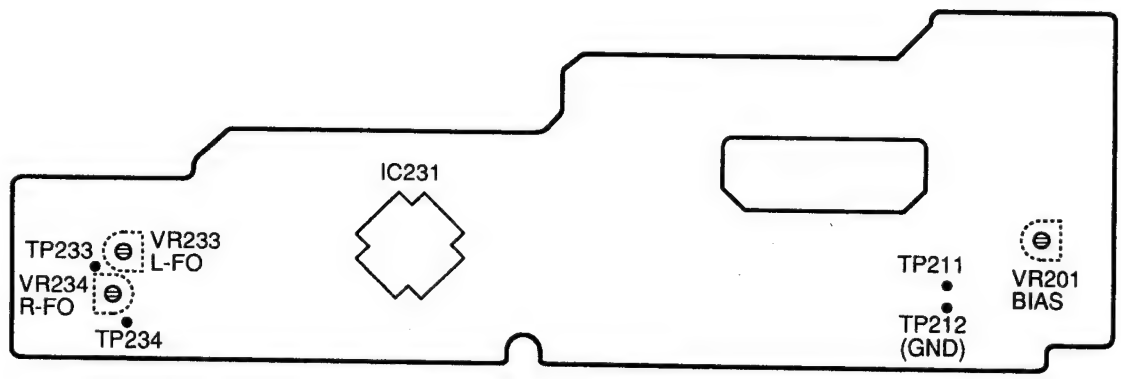
- Before making these adjustments, (especially, the tape guide height and audio control erase head height adjustments) should be carried out, so that the tape traveling between the loading guide pole and the audio control erase head runs without fluttering, twisting, curling.
- Before making these adjustments, Section 2-1. SERVO and Section 2-2. VIDEO circuit adjustments should be carried out.

2-3-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Oscilloscope	Vertical sensitivity : 10 mV/DIV Band width : more than 30 MHz
AC Voltmeter	Effective value indication Input frequency : 10 Hz ~ 20 kHz Input Impedance : more than 1 MΩ Measurement level : 1mV (full scale)
Frequency Counter	Input frequency : 20 Hz ~ 10 MHz
Blank Tape	VHS-type cassette tape

2-3-2. LOCATION OF ADJUSTMENT POINTS

P1B26100C-A1



AD-1 PWB (FOIL SIDE)

Fig. 2.3.1

AUDIO NORMAL CIRCUIT

Notes:

- Set the following switch or On-screen menu to the positions indicated below, before making following adjustments.

SWITCH or ON-SCREEN MENU	POSITION
TAPE SPEED (Remote control)	SP
O/AV (Remote control)	AV
AUDIO (SYSTEM SETTING menu)	MONO

To select AUDIO mode

1. Press the MENU/TV button on the remote control, the MAIN MENU appears.
2. "MODE" is selected, then press the OK button. MODE SETTING menu will appear.
3. "SYSTEM" is selected, then press the OK button. RECORDING AND PLAYBACK SYSTEM SETTING menu will appear.
4. "AUDIO" : "MONO" are selected, press the OK button.

2-3-3. BIAS LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP211 (HOT) TP212 (GND)	Oscilloscope AC voltmeter Frequency counter	REC (SP) mode Blank tape

ADJ. Location	ADJ. Value
VR201 (BIAS)	24 mVrms

1. Load the VCR with a blank tape and select the REC (SP) mode without all incoming signal.
2. After confirming on the oscilloscope that a 70 kHz ± 5kHz sine wave is being output, adjust VR201 (BIAS) so that the AC voltmeter's reading is **24 mVrms**.

AUDIO FM (Hi-Fi) CIRCUIT

Notes:

- Before making these adjustments, check that the surface of the parts touching the tape such as the A-FM head or guides are clean.
- Set the following switch or On-screen menu to the positions indicated below, before making following adjustments.

SWITCH or ON-SCREEN MENU	POSITION
TAPE SPEED (Remote control)	SP
O/AV (Remote control)	AV
AUDIO (SYSTEM SETTING menu)	ST

To select AUDIO mode

1. Press the MENU/TV button on the remote control, the MAIN MENU appears.
2. "MODE" is selected, then press the OK button. MODE SETTING menu will appear.
3. "SYSTEM" is selected, then press the OK button. RECORDING AND PLAYBACK SYSTEM SETTING menu will appear.
4. "AUDIO" : "ST" are selected, press the OK button.

2-3-4. A-FM CARRIER FREQUENCY ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP233 (1.4 MHz) TP234 (1.8 MHz)	Frequency counter	REC (SP) mode Blank tape

ADJ. Location	ADJ. Value
VR233 (L-FO)	1.4 MHz +4/–6 kHz
VR234 (R-FO)	1.8 MHz +4/–6 kHz

1. Connect a frequency counter to TP233 (Lch), TP234 (Rch) and ground.
2. Adjust VR233 (L-FO) so that in the zero level signal status the frequency at TP233 becomes **1.4 MHz +4/–6 kHz.**
3. Adjust VR234 (R-FO) so that in the zero level signal status the frequency at TP234 becomes **1.8 MHz +4/–6 kHz.**

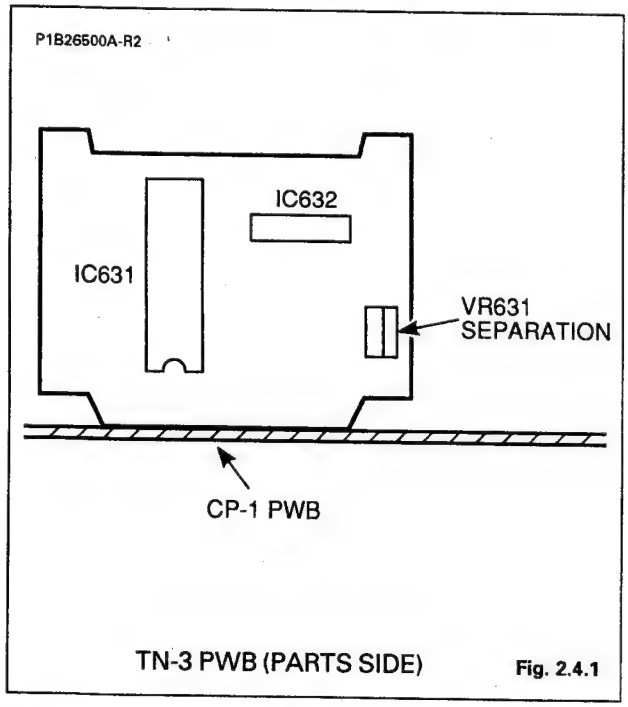
2-4. MTS DECODER CIRCUIT ADJUSTMENT

- If adjusting the MTS Decoder circuit, special equipment shown in section 2-4-1. is necessary.
- Improper adjustment will cause loss of performance of Stereo Sound and Bilingual Sound detection.
- Before making these adjustments, Section 2-1. SERVO, Section 2-2. VIDEO and Section 2-3. AUDIO circuit adjustments should be carried out.

2-4-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Audio Multiplex TV signal Generator	
Oscilloscope	Vertical sensitivity : 10 mV/DIV Band width : more than 30 MHz
AC Voltmeter	Dual channel
Low Path Filter	15 kHz (48 dB/oct)

2-4-2. LOCATION OF ADJUSTMENT POINTS



TN-3 PWB (PARTS SIDE) Fig. 2.4.1

Note:

- Set the following switch or On-screen menu to the positions indicated below, before making following adjustments.

SWITCH or ON-SCREEN MENU	POSITION
TAPE SPEED (Remote control)	SP
O/AV (Remote control)	AV
AUDIO (SYSTEM SETTING menu)	ST

To select AUDIO mode

1. Press the MENU/TV button on the remote control, the MAIN MENU appears.
2. "MODE" is selected, then press the OK button. MODE SETTING menu will appear.
3. "SYSTEM" is selected, then press the OK button. RECORDING AND PLAYBACK SYSTEM SETTING menu will appear.
4. "AUDIO" : "ST" are selected, press the OK button.

2-4-3. SEPARATION ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
AUDIO OUTPUT Terminal EURO AV1 pin3 (Lch)	Audio Multiplex TV signal generator Oscilloscope Low path filter 15 kHz (48 dB/oct)	E-E mode

ADJ. Location	ADJ. Value
VR631 (SEPARATION)	Minimum level

1. Input the output signal of the Audio Multiplex TV signal generator into the VCR ANT input terminal.
2. Connect the oscilloscope to the AUDIO OUTPUT terminal EURO AV1 pin3 (Lch) of the VCR via the LPF.
3. Set the Audio Multiplex TV signal generator as follows.
   Audio signal Rch: 1 kHz 30% modulation
   Audio signal Lch: Unmodulation
4. Adjust VR631 (SEPARATION) so that the output of the AUDIO OUTPUT terminal (Lch) is brought to its minimum level.

2-5. TUNER AND IF CIRCUITS ADJUSTMENT

- When any malfunction occurs in the TUNER circuit the whole unit must be replaced.
- An adjustment of the IF circuit is shown as follows.

Note: The TUNER unit does not need any adjustments, because precise adjustments have been performed before shipment.

2-5-1. TEST EQUIPMENT AND STANDARD REQUIRED

Monitor TV	

2-5-2. LOCATION OF ADJUSTMENT POINT

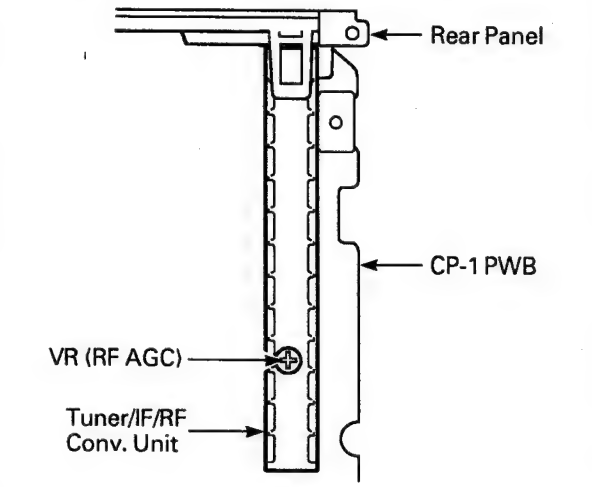


Fig. 2.5.1

2-5-3. RF AGC ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
Picture of monitor TV	Monitor TV	E-E mode
ADJ. Location		**ADJ. Value**
VR (RF AGC) (on the IF circuit)		S/N is best point

1. Connect the monitor TV to VHF/UHF ANTENNA OUTPUT terminal.
2. Connect the VHF antenna to VHF/UHF ANTENNA INPUT terminal.
3. Receive the middle electrical field (70 dBμ ~ 90 dBμ) of the VHF high channel, and slowly turn VR (RF AGC) from the point where snow-noise is present to the point where it just disappears from the monitor TV.
4. Confirm by monitor TV that there is no beat and saturation (S/N is best point) when receiving any TV channel.

3. TEST POINT FOR TAPE PATH ADJUSTMENT

Test point TP182 (ENV) and TP183 (SW-P) for tape path adjustment is shown in Figure below.
For adjustment, refer to the separete volume "Mechanical adjustments 6611 77 06 and 6611 90 10".

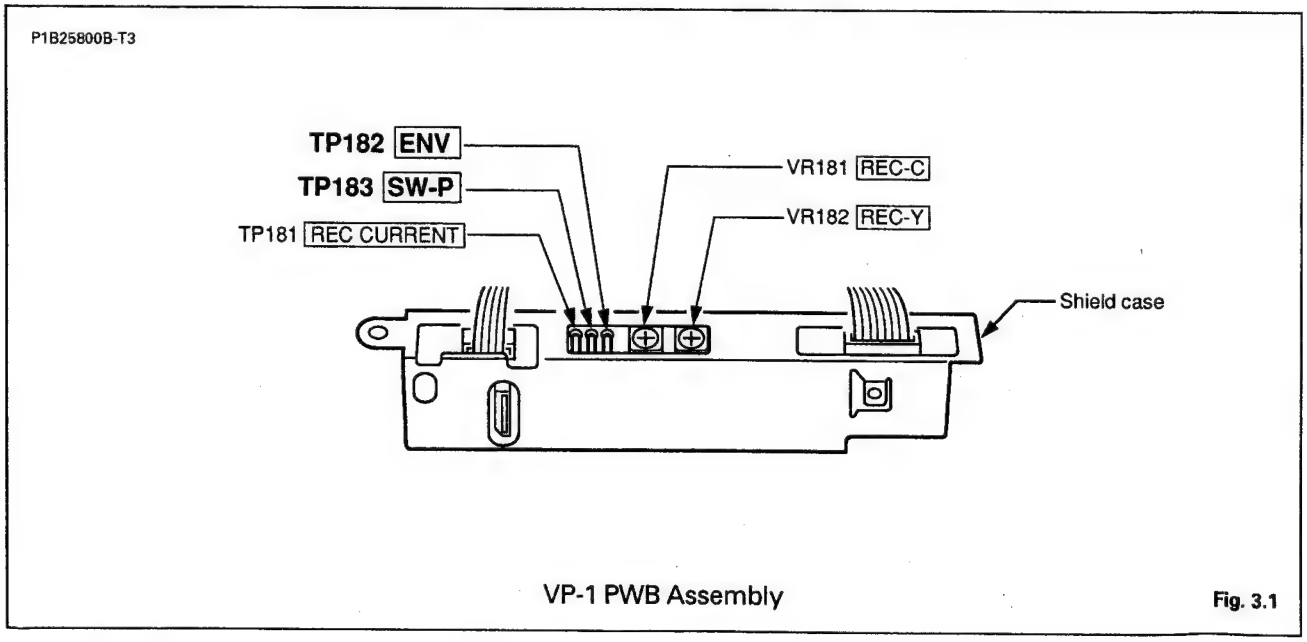


Fig. 3.1

4. PARTS LIST

ACCESSORIES

LOCATION	PARTS NO.	DESCRIPTION
	5652 2299	REMOCON,RC384(WITH COVER BATTERY) (EXCEPT VCR 3785UK)
OR	5652 2310	REMOCON,RC584(WITH COVER BATTERY) (VCR 3785UK ONLY)
	6134 5345	COVER BATTERY(FOR REMOCON)
	6612 7432	INSTRUCTION MANUAL (VCR 3785NE/SE ONLY)
OR	6612 7431	INSTRUCTION MANUAL(VCR 3785CE ONLY)
OR	6612 7433	INSTRUCTION MANUAL(VCR 3785NL ONLY)
OR	6612 7434	INSTRUCTION MANUAL(VCR 3785UK ONLY)
	4131 4221	CABLE,ANT(VCR 3785NE/SE,3785NL)
OR	4131 4286	CABLE,ANT(EXCEPT VCR 3785CE)
OR	4131 4198	CABLE,ANT(VCR 3785CE ONLY)
OR		CABLE,ANT(VCR 3785CE ONLY)
OR	4131 4309	CABLE,ANT PAL(VCR 3785CE ONLY)
OR		CABLE,ANT PAL(VCR 3785CE ONLY)
OR	4131 4203	CORD(VCR 3785NE/SE,3785NL)
OR		CORD(EXCEPT VCR 3785CE)
	⚠ 4131 8829	CORD,POWER(EXCEPT VCR 3785UK)
OR	⚠	CORD,POWER(EXCEPT VCR 3785UK)
OR	⚠	CORD,POWER(EXCEPT VCR 3785UK)
OR	⚠	CORD,POWER(EXCEPT VCR 3785UK)
OR	⚠ 4131 4287	CORD,POWER(VCR 3785UK ONLY)
OR	⚠ 4131 4287	CORD,POWER(VCR 3785UK ONLY)

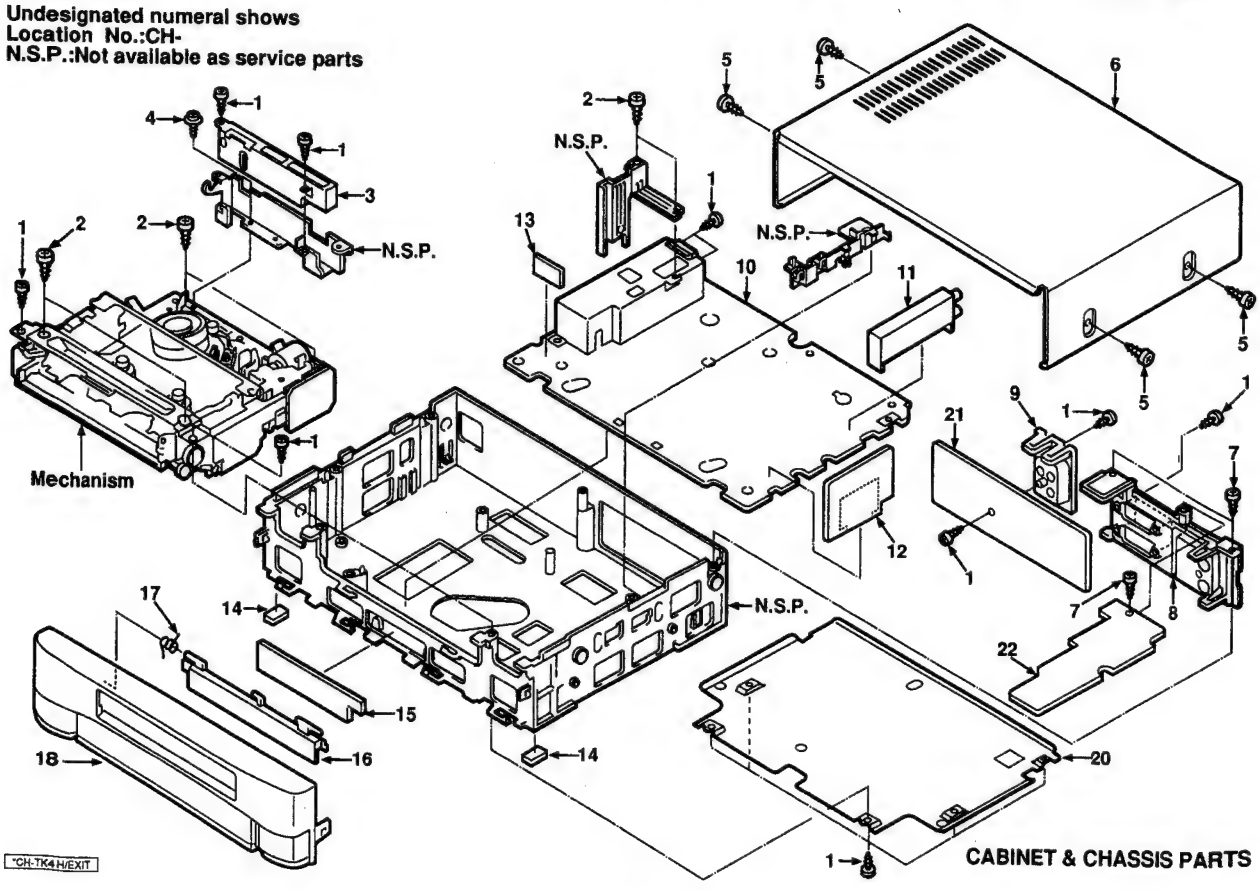
PACKING MATERIALS

LOCATION	PARTS NO.	DESCRIPTION
	6162 8917	CARTON CASE(VCR 3785NE/SE ONLY)
OR	6162 8925	CARTON CASE(VCR 3785CE ONLY)
OR	6162 8926	CARTON CASE(VCR 3785NL ONLY)
OR	6162 8927	CARTON CASE(VCR 3785UK ONLY)
	6172 3091	CUSHION,FRONT(EXCEPT VCR 3785UK)
OR	6172 3094	CUSHION,FRONT(VCR 3785UK ONLY)
	6172 3092	CUSHION,BACK(EXCEPT VCR 3785UK)
OR	6172 3095	CUSHION,BACK(VCR 3785UK ONLY)
		POLYE COVER,INNER-K

CABINET & CHASSIS PARTS

LOCATION	PARTS NO.	DESCRIPTION
CH-1		SCR L-TPG BIN 3X10
CH-2		SCR S-TPG BIN 4X12
CH-3	6913 4655	COMPL PWB,VP-1
CH-4		SCR PAN+FLG 3X6
OR		SCR PAN+FLG 3X6
CH-5		SPECIAL SCREW
CH-6	6135 5178	COMPL,COVER TOP(VCR 3785UK ONLY)
OR	6135 5175	COVER TOP(EXCEPT VCR3785UK)
CH-7		SCR S-TPG BIN 3X10
CH-8	8681 5362	TERMINAL(EXCEPT VCR 3785UK)
OR	8681 5363	TERMINAL(VCR 3785UK ONLY)
CH-9		TERMINAL
CH-10	6913 4654	COMPL PWB,CP-1-A (VCR 3785NE/SE ONLY)
OR	6913 4660	COMPL PWB,CP-1-A(VCR 3785CE ONLY)
OR	6913 4661	COMPL PWB,CP-1-A(VCR 3785NL ONLY)
OR	6913 4662	COMPL PWB,CP-1-A(VCR 3785UK ONLY)
CH-11	5823 0513	TUNER,RF/TU/IF(EXCEPT VCR 3785UK)
OR	5823 0617	TUNER,RF/TU/IF(VCR 3785UK ONLY)
CH-12	6913 4663	COMPL PWB,TN-3(VCR 3785CE,3785NL)
OR	6913 4652	COMPL PWB,TN-5(VCR 3785NE/SE ONLY)
OR	6913 4664	COMPL PWB,TN-5(VCR 3785UK ONLY)
CH-13	6913 0957	COMPL PCB,TM-8(VCR 3785CE ONLY)
OR	6913 4634	COMPL PWB,TM-7(EXCEPT VCR 3785CE)
CH-14	6273 4052	STAND,FELT,FRONT
CH-15	6913 4631	COMPL PWB,TM-1
CH-16	6134 5388	DOOR,CASSETTE(VCR 3785NE/SE,3785UK)
OR	6134 5389	DOOR,CASSETTE(VCR 3785CE,3785NL)
CH-17	7358 4829	SPRING
CH-18	6418 3471	ASSY,CABINET FRONT (EXCEPT VCR 3785UK)
OR	6418 3476	ASSY,CABINET FRONT(VCR 3785UK ONLY)
CH-20	6135 5174	COVER BOTTOM
CH-21	6913 4656	COMPL PWB,TB-1(EXCEPT VCR 3785UK)
OR	6913 4665	COMPL PWB,TB-1(VCR 3785UK ONLY)
CH-22	6913 4653	COMPL PWB,AD-1 (VCR 3785NE/SE,3785UK)
OR	6913 4666	COMPL PWB,AD-1(VCR 3785CE,3785NL)

Undesignated numeral shows Location No.:CH-
N.S.P.:Not available as service parts

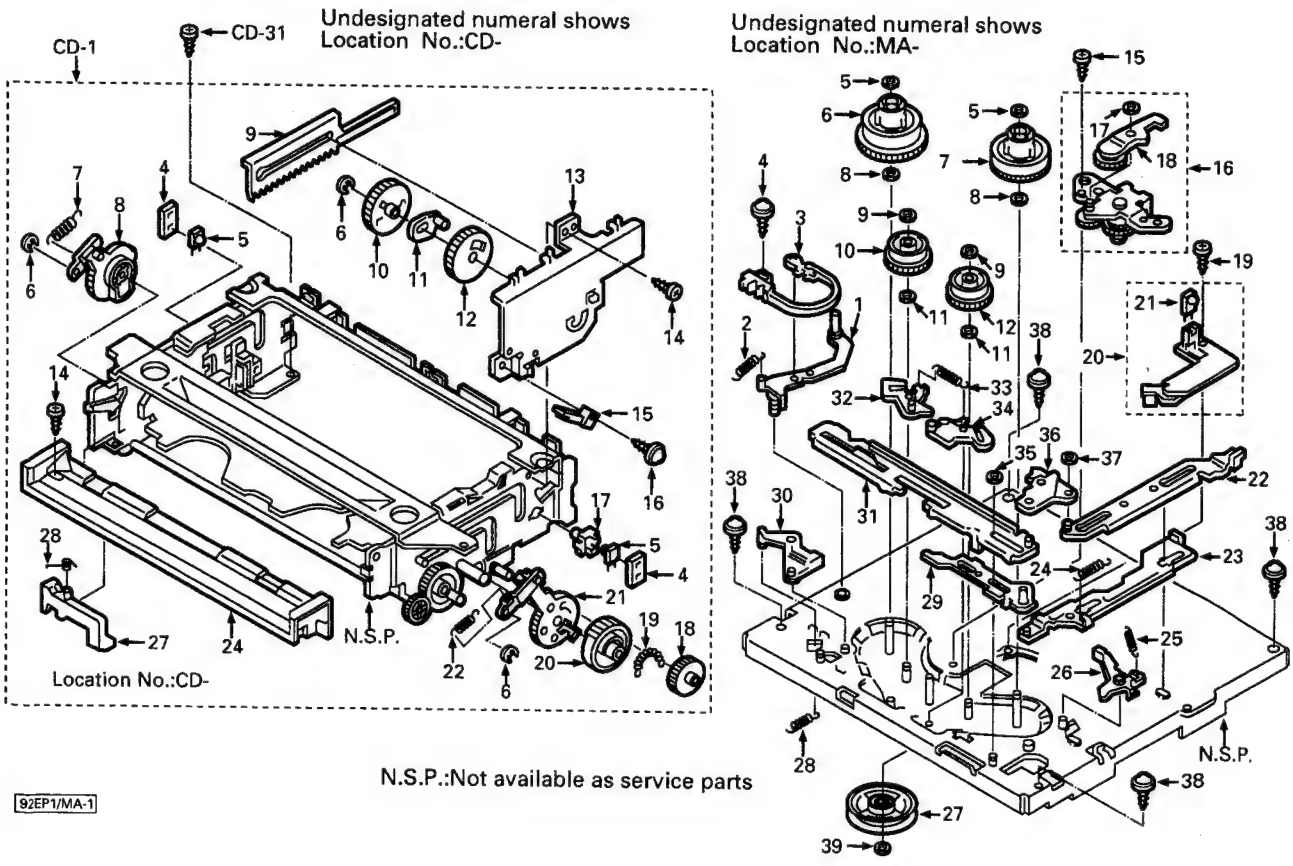


MECHANISM PARTS

CB602700
MB0054ZZ

LOCATION	PARTS NO.	DESCRIPTION
MECHANISM PARTS 1		
CD-1	8318 6017	COMPL,CASSETTE MECHA
CD-4	8681 4250	LID
CD-5	3656 3089	PHOTO COUPLE PN150SAN
CD-6		RING E 2.3
CD-7	7358 4341	SPRING,LINK L
CD-8	7525 1181	ASSY,GEAR,LEVER L
CD-9	8318 5316	RACK
CD-10	7525 1399	GEAR,LOCK
CD-11	8681 5276	ASSY,LEVER,PINION
CD-12	7525 1183	GEAR,PINION
CD-13	8681 4097	ASSY,BRACKET,GEAR
CD-14		SCR S-TPG BIN 2.6X4
CD-15	4112 7484	SW,SPECIAL
CD-16		SCR PAN+SW+W 2X9
CD-17	8681 4816	HOLDER,TRANSISTOR
CD-18	7525 1184	GEAR,IDLER
CD-19	7358 4363	SPRING,GEAR MAIN
CD-20	7525 1185	GEAR,MAIN
CD-21	7525 1186	ASSY,GEAR,LEVER R
CD-22	7358 4342	SPRING,LINK R
CD-24		BOARD,UNDER
CD-27	8318 5860	LEVER,SAFETY SW
CD-28	7358 4713	SPRING,SAFETY SW
CD-31		SCR BIN 3X6
MA-1	8681 4388	ASSY,LEVER,TENSION
MA-2	7358 4390	SPRING,LEVER TENSION
MA-3	8681 4120	ASSY,HOLDER,BAND
MA-4		SCR PAN+SW+W 2.6X6
MA-5		WASHER Y 2.6X6X0.25
MA-6	6253 4244	ASSY,REEL,SUPPLY
OR	6253 4246	ASSY,REEL,SUPPLY
MA-7	6253 4245	ASSY,REEL,TAKE UP
OR	6253 4255	ASSY,REEL,TAKE UP

LOCATION	PARTS NO.	DESCRIPTION
MA-8	7726 0615	SPECIAL WASHER 3.1X6X0.3
OR	7726 0594	SPECIAL WASHER 3.1X6X0.4
OR	7726 0585	SPECIAL WASHER 3.1X6X0.5
MA-9	6158 2019	WASHER Y 2.1X5X0.25
OR		WASHER Y 2.1X6X0.25
MA-10	7525 1348	GEAR,REEL SUPPLY
OR	7525 1398	GEAR,REEL SUPPLY
MA-11	7726 0618	SPECIAL WASHER 2.6X6X0.25
MA-12	7525 1349	GEAR,REEL TAKE UP
OR	7525 1397	GEAR,REEL TAKE UP
MA-15		SPECIAL SCREW 2.6X4
MA-16	7548 4261	COMPL,IDLER,CLUTCH
MA-17		WASHER Y 2.1X4X0.25
MA-18	7548 4260	ASSY,IDLER
MA-19		SCR S-TPG BIN 2.6X8
MA-20	6913 1130	COMPL PCB,MC-4
MA-21	3681 1690	LED LN59
MA-22	8681 4121	ASSY,SLIDE,ACT PLATE
MA-23	8681 5262	SLIDE,C BRAKE
MA-24	7358 4345	SPRING,RETURN SLIDE
MA-25	7358 4346	SPRING,SUB T
MA-26	8681 4382	ASSY,BRAKE SUB T
MA-27	7548 4226	PULLEY,REEL
MA-28	7358 4347	SPRING,SUB SUPPLY
MA-29	8681 4105	SLIDE,ACT BRAKE
MA-30	8681 4163	BRAKE,SUB SUPPLY
MA-31	8681 4107	ASSY,SLIDE,M PLATE
MA-32	8681 4108	ASSY,BRAKE,SUPPLY
MA-33	7358 4488	SPRING,MAIN BRAKE
MA-34	8681 4109	ASSY,BRAKE,TAKE UP
MA-35		WASHER Y 2.6X5X0.5
MA-36	8681 4110	LEVER,CONT PLATE
MA-37	7726 0611	SPECIAL WASHER
MA-38		SCR S-TPG BIN 4X12
MA-39		SPECIAL WASHER 2.4X6X0.25



92EP1/MA-1

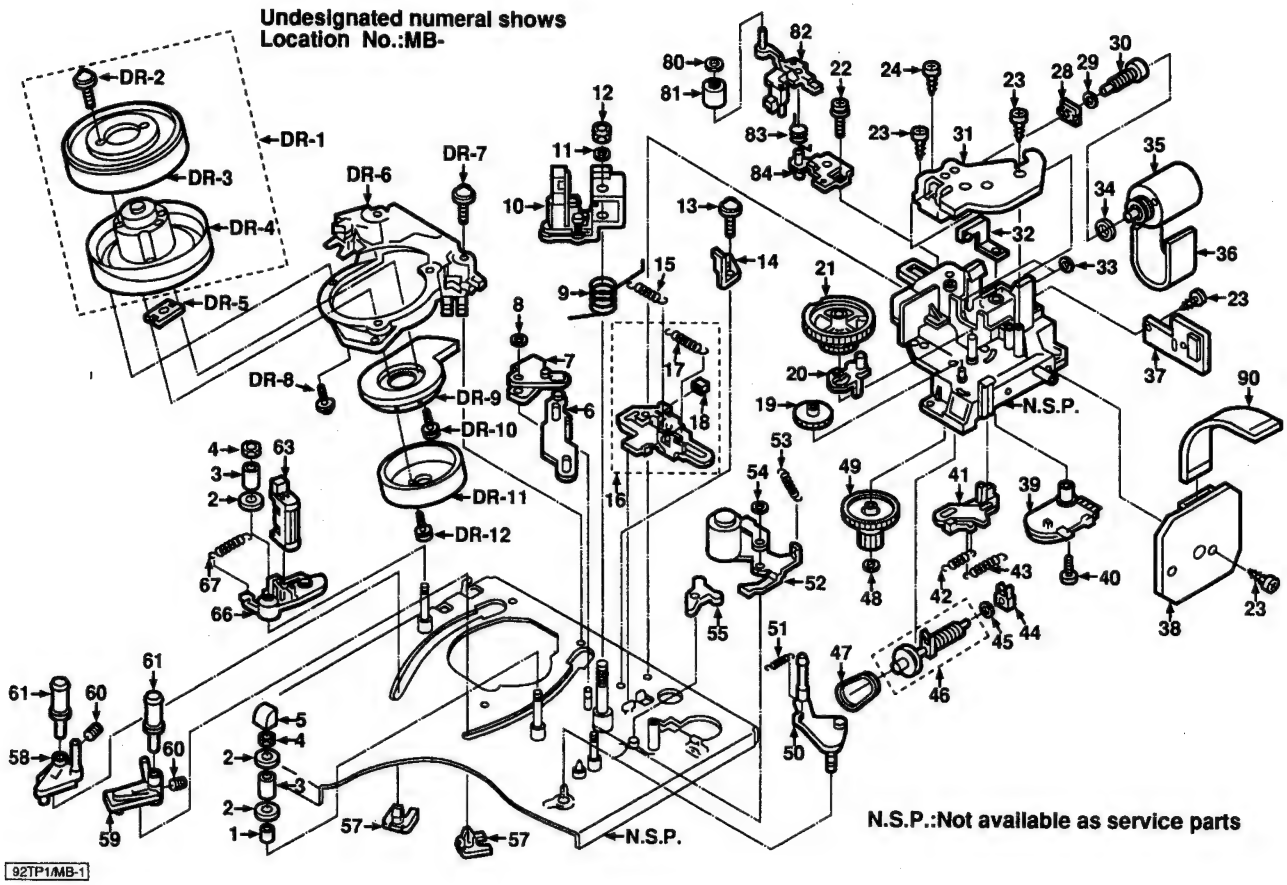
MECHANISM PARTS 2

LOCATION	PARTS NO.	DESCRIPTION
DR-1	4335 9371	COMPL,CYLINDER,4H6P-R
DR-2		SCR PAN+W 3X8
DR-3	4335 9372	ASSY,CYLINDER,UPR 4H6P-R
DR-4	4335 9370	ASSY,CYLINDER,LWR 6K
DR-5	8318 5783	SPACER,MOTOR 0.3T
DR-6	8681 4885	BASE,CYLINDER
DR-7		SCR PAN+FLG 3X6
DR-8		SCR PAN+FLG 2.6X8
DR-9	4335 9337	STATOR,MOTOR CYL
OR		STATOR,MOTOR CYL
DR-10		SCR PAN+SW 2.3X10
OR		SCR PAN+SW 2.3X8
DR-11	4335 9317	ROTOR,MOTOR CYL
DR-12		SCR PAN+SW 2.3X6
MB-1	8318 5862	SLEEVE
MB-2	7726 0622	SPECIAL WASHER
MB-3	8318 5863	TAPE GUIDE
MB-4		NUT HEX (3)
MB-5	8681 4881	CAP
MB-6	8681 5314	SLIDE,ACT PINCH
MB-7	8681 4113	ASSY,LEVER,CAM PINCH
MB-8	6158 2016	WASHER Y 3.1X8X0.5
MB-9	7358 4350	SPRING,ACE HEAD
MB-10	8681 5249	COMPL,BRACKET,HEAD
MB-11	7726 0653	SLEEVE,ACE HEAD
MB-12	7711 0176	SPECIAL NUT (M5)
MB-13		SCR PAN+SW+W 2.6X5
MB-14	8681 4817	BRACKET,STOPPER
MB-15	7358 4352	SPRING,SLIDE BRAKE
MB-16	8681 4927	COMPL,SLIDE,CAM
MB-17	7358 4351	SPRING,LINK LOCK
MB-18	7522 0219	DAMPER
MB-19	7525 1193	GEAR,FRONT LOAD
MB-20	8681 4384	ASSY,LEVER,FRONT
MB-21	7525 1347	GEAR,HELICAL FRONT
MB-22		SCR PAN+SW+W 2.6X6
MB-23		SCR S-TPG PAN 2.6X6
MB-24		SCR S-TPG BIN 2.6X8
OR		SCR S-TPG PAN 2.6X8
MB-28	8681 4127	HOLDER,WORM
MB-29		WASHER
MB-30	7525 1195	ASSY,WORM,FRONT
MB-31	8318 5722	BRACKET,HOLDER
MB-32	8318 5532	PLATE,NUT
MB-33	8868 0723	DAMPER,MOTOR
MB-34	8681 4123	DAMPER,WORM
MB-35	4432 8818	ASSY,LOADING MOTOR
MB-36	8868 0724	DAMPER,MOTOR
MB-37	6913 1082	COMPL PCB,MC-3
MB-38	6913 4650	COMPL PWB,MC-2
MB-39	4112 9866	ROTARY SWITCH
MB-40		SCR PAN 2.6X13
MB-41	8681 4385	ASSY,SLIDE,FRONT
MB-42	7358 4457	SPRING,LEVER LOAD
MB-43	7358 4458	SPRING,LEVER ACT
MB-44	8681 4386	HOLDER,WORM
OR	8681 4977	HOLDER,WORM
MB-45		WASHER 2.1X6X0.5
MB-46	7525 1264	ASSY,WORM,LOAD
MB-47	7618 4267	BELT,LOADING
MB-48		WASHER SLIT 2.6X5X0.50
MB-49	7525 1191	GEAR,HELICAL
MB-50	8681 4628	ASSY,LEVER,REV GUIDE
MB-51	7358 4356	SPRING,REVIEW LEVER
MB-52	7538 3373	COMPL,PINCH ROLLER
MB-53	7358 4830	SPRING,PINCH ROLLER
MB-54	6158 2015	WASHER Y 3.6X6X0.5
MB-55	8681 4128	COMPL,LEVER,ACT BRAKE
MB-57	8318 6040	PLATE,BGR
MB-58	8681 5264	ASSY,MOUNTING,ROLLER S
MB-59	8681 5265	ASSY,MOUNTING,ROLLER T
MB-60	6158 2020	SCR SET HEX-SCT 2X3
MB-61	8681 4132	ASSY,GUIDE,ROLLER
MB-63	4335 9466	HEAD,ERASE FULL
MB-66	8318 6072	LEVER,FE HEAD
MB-67	7358 4357	SPRING,ERASE HEAD
MB-80	6158 2018	WASHER Y 2.6X6X0.5
MB-81	8681 5364	ASSY,ROLLER,CLEANER
MB-82	8318 6013	ASSY,LEVER,CLEANER
MB-83	7358 4714	SPRING
MB-84	8681 5245	BRACKET,CLEANER
MB-90	4131 4333	FLEXIBLE FLAT CABLE CN811-CN303

MECHANISM PARTS 3

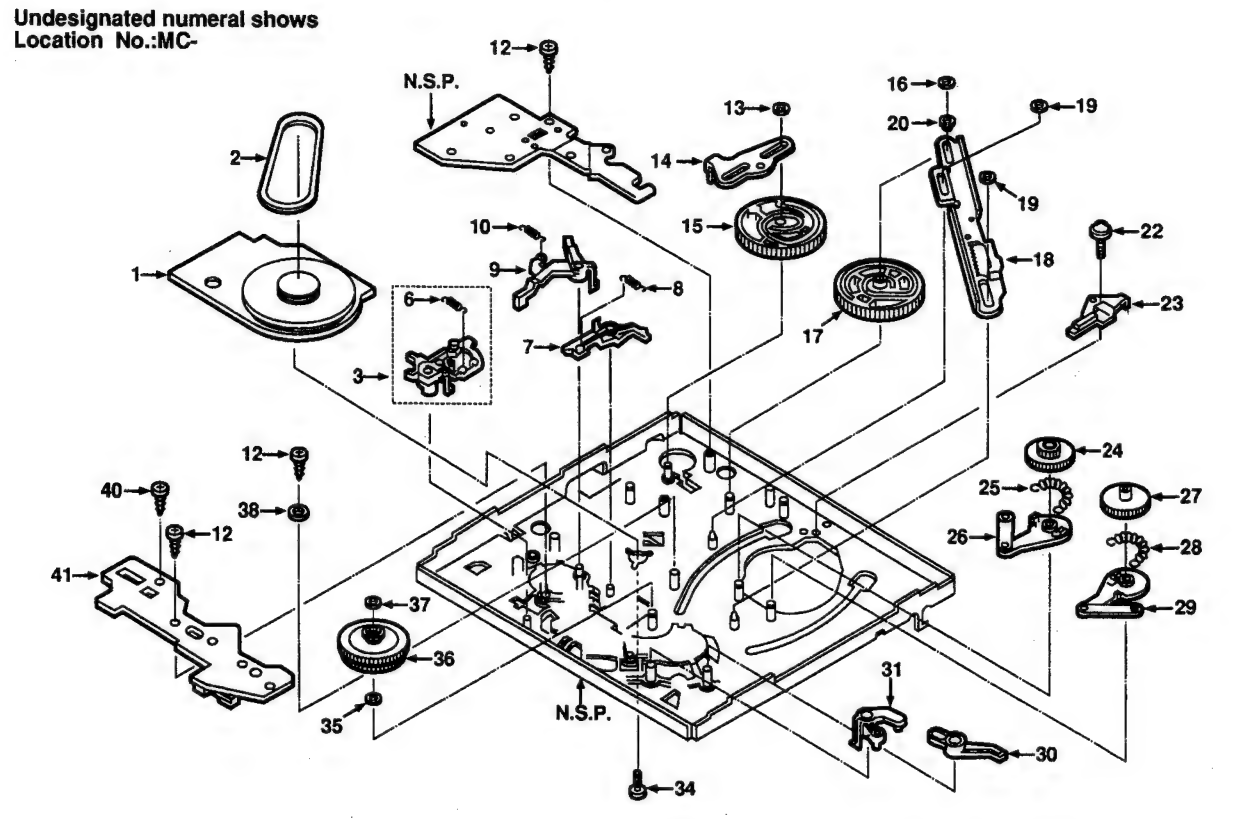
MC-1	4432 9389	MOTOR,CAPSTAN DC 3W
MC-2	7618 4268	BELT,REEL DRIVE
MC-3	8681 4971	COMPL,LEVER,CLUTCH
MC-6	7358 4359	SPRING,LEVER CLUTCH
MC-7	8681 4136	LEVER,CHANGE CLUTCH
MC-8	7358 4360	SPRING,CHANGE CLUTCH
MC-9	8681 4167	ASSY,BRAKE,CAPSTAN
MC-10	7358 4453	SPRING,CAPSTAN
MC-12		SCR S-TPG BIN 2.6X8
MC-13	6158 2016	WASHER Y 3.1X8X0.5
MC-14	8681 5263	SLIDE,CAM PLATE
MC-15	7525 1196	CAM,MODE
MC-16	6158 2017	WASHER Y 3.1X6X0.5
MC-17	7525 1350	CAM,MAIN
MC-18	8681 4976	ASSY,RACK,LOAD
MC-19	6158 2018	WASHER Y 2.6X6X0.5
MC-20	7726 0654	SPACER,RACK LOAD
MC-22		SCR PAN+FLG 3X4
MC-23	7358 4365	ASSY,EARTH,CYL
MC-24	7525 1351	GEAR,LOAD TAKE UP
MC-25	7358 4361	SPRING,GEAR LOAD T
MC-26	8681 4141	ASSY,LEVER,LOAD T
MC-27	7525 1199	GEAR,LOAD S
MC-28	7358 4362	SPRING,GEAR LOAD S
MC-29	8681 4142	ASSY,LEVER,LOAD S
MC-30	8681 4143	LEVER,RETURN TENSION
MC-31	8681 4387	ASSY,LEVER CONTROL
MC-34		SCR S-TPG PAN 2.6X6
MC-35	7726 0621	SPECIAL WASHER 3.1X6X0.25
MC-36	7525 1396	ASSY,GEAR,FRICTION
MC-37		SPECIAL WASHER 2.4X6X0.25
MC-38		WASHER Z 2.6X10X0.5
MC-40		SCR S-TPG BIN 2.6X5
MC-41	6913 1133	COMPL,MC-1

EXPLODED VIEW OF MECHANISM PARTS 2



N.S.P.:Not available as service parts

EXPLODED VIEW OF MECHANISM PARTS 3



N.S.P.:Not available as service parts

ELECTRICAL PARTS

NOTE-2

NOTE;

1. Materials of Capacitors and Resistors are abbreviated as follows;

Resistors

MT-FILM ..... Metallized Film Resistor
MT-GLAZE ..... Metallized Glaze Reistor
OXIDE-MT ..... Oxide Metallized film Resistor

Capacitors

MT-POLYEST ..... Metallized Polyester capacitor
MT-COMPO ..... Metallized Composite capacitor
TA-SOLID ..... Tantalum Solid Capacitor
AL-SOLID ..... Aluminium Solid Capacitor
NP-ELECT ..... Non-Polarized Electrolytic Capacitor
OS-SOLID ..... Aluminium Solid Capacitors with Organic Semiconductive Electrolytic Capacitor
DL-ELECT ..... Double Layered Electrolytic Capacitor

2. Tolerance of Capacitor (10pF over) and Resistor are noted with follow symbols.

F ..... ± 1% G ..... ± 2% J ..... ± 5% K ..... ± 10%
M ..... ± 20% N ..... ± 30% Z ..... ± 80% ~ –20%

3. Capacitors

U: μH P: pF

4. Inductors

UH: μH MH: mH

5. N.S.P.; Not available as service parts.

COMPL PWB,CP-1-A

COMPLNO.6913 4654 (VCR 3785NE/SE ONLY)
COMPLNO.6913 4660 (VCR 3785CE ONLY)
COMPLNO.6913 4662 (VCR 3785UK ONLY)
COMPLNO.6913 4661 (VCR 3785NL ONLY)

(SEMICONDUCTORS)

LOCATION	PARTS NO.	DESCRIPTION
Q1002	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1003	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q1004	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q1006	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1011	3614 4377	TR DTC144EL
OR		TR UN6213
Q1012	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1151	3614 4620	TR DTC124EL
OR		TR UN6212
Q1152	3614 8821	TR DTA114EL
OR		TR UN6111
Q1301	3614 4402	TR DTA144EL
OR		TR UN6113
Q1312	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1313	3614 4377	TR DTC144EL
OR		TR UN6213
Q1601	3614 5281	TR 2SA608-F-SPA
OR	3614 5540	TR 2SA933S-R
Q1621	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-Q
OR	3614 5240	TR 2SC1740S-R
OR	3614 4947	TR 2SC536-E-SPA
OR	3614 3969	TR 2SC536-F-SPA
Q1622	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1623	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q1651	3614 4377	TR DTC144EL
OR		TR UN6213
Q1652	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1653	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1654	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q3503	3614 4377	TR DTC144EL
OR		TR UN6213
Q3504	3614 4377	TR DTC144EL
OR		TR UN6213
Q3551	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q3552	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q3553	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q5001	3614 7812	TR 2SK1460
OR		TR 2SK1460LS
Q5002	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5003	3614 4543	TR 2SA984-F
Q5004	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5101	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5102	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5103	3614 4494	TR DTA144ES
OR	3614 5280	TR 2SA1345
Q5104	3614 5227	TR DTC144ES
OR	3614 5279	TR 2SC3399
Q6001		TR 2SK1104-P(VCR 3785UK ONLY)
OR		TR 2SK1104-Q(VCR 3785UK ONLY)
OR		TR 2SK1104-R(VCR 3785UK ONLY)
OR	3614 7523	TR 2SK222-D(VCR 3785UK ONLY)
OR		TR 2SK222-E(VCR 3785UK ONLY)
OR	3614 7748	TR 2SK772-E(VCR 3785UK ONLY)
OR		TR 2SK772-F(VCR 3785UK ONLY)
Q6002	3614 5227	TR DTC144ES(VCR 3785UK ONLY)
OR	3614 5279	TR 2SC3399(VCR 3785UK ONLY)
Q6004	3614 7685	TR 2SC3901(VCR 3785NE/SE,3785UK)
Q6005	3614 4494	TR DTA144ES(VCR 3785NE/SE,3785UK)
OR	3614 5280	TR 2SA1345(VCR 3785NE/SE,3785UK)

LOCATION	PARTS NO.	DESCRIPTION
Q6006	3614 5227	TR DTC144ES(VCR 3785NE/SE,3785UK)
OR	3614 5279	TR 2SC3399(VCR 3785NE/SE,3785UK)
Q6008	3614 4691	TR KSC2785-Y(VCR 3785NE/SE,3785UK)
OR	3614 3781	TR 2SC1740S-Q(VCR 3785NE/SE,3785UK)
OR	3614 5240	TR 2SC1740S-R(VCR 3785NE/SE,3785UK)
OR	3614 4947	TR 2SC536-E-SPA (VCR 3785NE/SE,3785UK)
OR	3614 3969	TR 2SC536-F-SPA (VCR 3785NE/SE,3785UK)
Q6051	3614 4690	TR KSA1175-Y
OR	3614 4942	TR 2SA608-E-SPA
OR	3614 5281	TR 2SA608-F-SPA
OR	3614 4542	TR 2SA933S-Q
OR	3614 5540	TR 2SA933S-R
Q6052	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q6901	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-Q
OR	3614 5240	TR 2SC1740S-R
OR	3614 4947	TR 2SC536-E-SPA
OR	3614 3969	TR 2SC536-F-SPA
Q6902	3614 4690	TR KSA1175-Y
OR	3614 4942	TR 2SA608-E-SPA
OR	3614 5281	TR 2SA608-F-SPA
OR	3614 4542	TR 2SA933S-Q
OR	3614 5540	TR 2SA933S-R
Q6903	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-Q
OR	3614 5240	TR 2SC1740S-R
OR	3614 4947	TR 2SC536-E-SPA
OR	3614 3969	TR 2SC536-F-SPA
Q6904	3614 5227	TR DTC144ES
OR	3614 5279	TR 2SC3399
Q6921	3614 4546	TR 2SC2960-F-SPA(VCR 3785UK ONLY)
OR	3614 4547	TR 2SC2960-G-SPA(VCR 3785UK ONLY)
(INTEGRATED CIRCUITS)		
IC101	3771 6946	IC LA7345AM
OR		IC LA7345AM-MPB
IC111	3771 6749	IC LC89925
IC161	3771 4675	IC BA7021(VCR 3785UK ONLY)
OR	3771 5789	IC LA7221(VCR 3785UK ONLY)
IC162	3771 6950	IC LC74760M-8797
IC301	3771 6951	IC LC866648V-5554 (VCR 3785CE,3785NL)
OR	3771 6952	IC LC866648V-5555(VCR 3785UK ONLY)
OR	3771 6953	IC LC866648V-5566 (VCR 3785NE/SE ONLY)
IC302	3771 6948	IC LB1643
IC303	3771 8824	IC MN1380-L
OR	3771 6775	IC MN1381-L
IC351	3771 6944	IC BU2896K
IC511	3771 5863	IC L5431
IC512	3771 6945	IC PQ12RF11
IC602		IC AT24C02-10PC(VCR 3785UK ONLY)
OR	3771 6956	IC AT24C04-10PC(EXCEPT VCR 3785UK)
OR	3771 6774	IC LE24C02S1(VCR 3785UK ONLY)
OR	3771 6748	IC LE24C04S1(EXCEPT VCR 3785UK)
OR	3771 6588	IC ST24C02AB1(VCR 3785UK ONLY)
OR		IC X24C02P-C7189(VCR 3785UK ONLY)
OR		IC X24C04P-C7346(EXCEPT VCR 3785UK)
IC692	3771 5050	IC L5631(VCR 3785UK ONLY)
OR	3771 4088	IC UPC574J(VCR 3785UK ONLY)
(DIODES)		
D1003	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1004	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1008	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1009	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133

LOCATION	PARTS NO.	DESCRIPTION
D1015	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1301	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1601	3656 2770	DIODE GMA01(VCR 3785UK ONLY)
OR	3656 2230	DIODE 1SS133(VCR 3785UK ONLY)
D1602	3656 2770	DIODE GMA01(VCR 3785UK ONLY)
OR	3656 2230	DIODE 1SS133(VCR 3785UK ONLY)
D1611	3656 3392	ZENER DIODE GZS5.6X (VCR 3785UK ONLY)
OR	3656 3081	ZENER DIODE MTZ5.6B (VCR 3785UK ONLY)
D1612	3656 3392	ZENER DIODE GZS5.6X (VCR 3785UK ONLY)
OR	3656 3081	ZENER DIODE MTZ5.6B (VCR 3785UK ONLY)
D1621	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1622	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1671	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1699	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3001	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3101	3656 2770	DIODE GMA01(EXCEPT VCR 3785UK)
OR	3656 2230	DIODE 1SS133(EXCEPT VCR 3785UK)
D3102	3656 2770	DIODE GMA01(VCR 3785UK ONLY)
OR	3656 2230	DIODE 1SS133(VCR 3785UK ONLY)
D3103	3656 2770	DIODE GMA01(EXCEPT VCR 3785UK)
OR	3656 2230	DIODE 1SS133(EXCEPT VCR 3785UK)
D3104	3656 2770	DIODE GMA01(VCR 3785UK ONLY)
OR	3656 2230	DIODE 1SS133(VCR 3785UK ONLY)
D3105	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3106	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3107	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3110	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3111	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3112	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3113	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3121	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3122	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3123	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3502	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3510	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3554	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D5001	3656 3652	DIODE DBC10G
D5003	3656 3131	DIODE 1SS244
D5004	3656 3131	DIODE 1SS244
D5006	3656 3131	DIODE 1SS244
D5010	3656 3178	DIODE AP01C
D5013	⚠ 3681 1830	PHOTO COUPLE PC120FB
D5101	3656 3734	DIODE RK36LF-B1
D5102	3656 3331	DIODE RL2Z-LF-B1
D5103	3656 3131	DIODE 1SS244
D5104	3656 3131	DIODE 1SS244
D5105	3656 3181	DIODE AG01
D5108	3656 8812	ZENER DIODE MTZJ5.6C
D5109	3656 8812	ZENER DIODE MTZJ5.6C
D5110	3656 3055	DIODE DSK10C
OR	3656 3056	DIODE ERA15-02
D5112	3656 8812	ZENER DIODE MTZJ5.6C

LOCATION	PARTS NO.	DESCRIPTION
D6901	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D6902	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D6903	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D6910	3656 3735	ZENER DIODE MTZJ33C (EXCEPT VCR 3785UK)
(CRYSTAL DEVICES)		
X1001	4421 2238	OSC,CRYSTAL 4.433619MHZ
OR		OSC,CRYSTAL 4.433619MHZ
OR		OSC,CRYSTAL 4.433619MHZ
X1621	4421 2466	CRYSTAL
OR		OSC,CRYSTAL 17.734475MHZ
X3001		OSC,CERAMIC 13.31MHZ
OR	4421 2249	OSC,CERAMIC 13.31MHZ
X3002		OSC,CRYSTAL 32.768KHZ
OR	4421 2348	OSC,CRYSTAL 32KHZ
(VARIABLE RESISTORS)		
VR101		VR,SEMI 22KB
OR		VR,SEMI 22KB
VR102	3112 9897	VR,SEMI 2.2KB
OR		VR,SEMI 2.2KB
VR103	3112 9637	VR,SEMI 6.8KB
OR		VR,SEMI 6.8KB
VR104		VR,SEMI 10KB
OR		VR,SEMI 10KB
VR351	3111 8965	SEMI VR 220KB
OR	3112 9679	VR,SEMI 220KB
(TRIMMER)		
CT120	3412 9041	TRIMMER
(INDUCTORS)		
L1002	4543 2197	COIL,INDUCTOR 1.0UHK
OR	4543 3478	HF CHOKE 1.0UHM
L1004	4543 8727	COIL,INDUCTOR 150UHK
OR		HF CHOKE 150UHK
L1005	4543 8727	COIL,INDUCTOR 150UHK
OR		HF CHOKE 150UHK
L1007	4543 2230	COIL,INDUCTOR 18UHK
OR		HF CHOKE 18UHK
L1008	4543 3252	COIL,INDUCTOR 15UHK
OR		HF CHOKE 15UHK
L1009	4543 3242	COIL,INDUCTOR 2.2UHK
OR		HF CHOKE 2.2UHM
L1010	4543 8728	COIL,INDUCTOR 27UHK
OR		HF CHOKE 27UHK
L1012	4543 3409	COIL,INDUCTOR 39UHJ
OR	4543 3236	HF CHOKE 39UHJ
L1013	4543 8725	COIL,INDUCTOR 33UHK
OR		HF CHOKE 33UHK
L1014	4543 3409	COIL,INDUCTOR 39UHJ
OR	4543 3236	HF CHOKE 39UHJ
L1101	4543 3337	COIL,INDUCTOR 220UHK
OR		HF CHOKE 220UHK
L1622	4543 2258	COIL,INDUCTOR 5.6UHK
OR		HF CHOKE 5.6UHK
L3001	4543 8763	CORE
OR		CORE,BEAD
L3003	4543 8763	CORE(EXCEPT VCR 3785UK)
OR		CORE,BEAD(EXCEPT VCR 3785UK)
L5001	⚠ 4543 4029	LINE FILTER
L5002	⚠ 4552 6841	LINE FILTER(VCR 3785CE ONLY)
L5010	4543 4008	FERRITE CORE
L5101	4543 4008	FERRITE CORE
L5102	4543 4008	FERRITE CORE
L6008	4543 1989	COIL,INDUCTOR 10UHK
OR		HF CHOKE 10UHK
L6009	4543 2256	COIL,INDUCTOR 10UHJ
L6051	4543 2199	COIL,INDUCTOR 100UHK
OR		HF CHOKE 101UHK

LOCATION	PARTS NO.	DESCRIPTION
L6602	4543 1989	COIL,INDUCTOR 10UHK (VCR 3785CE,3785NL)
OR		HF CHOKE 10UHK(VCR 3785CE,3785NL)
L6604	4543 2197	COIL,INDUCTOR 1.0UHK
OR	4543 3478	HF CHOKE 1.0UHM
L6606	4543 2258	COIL,INDUCTOR 5.6UHK
OR		HF CHOKE 5.6UHK
(TRANSFORMERS)		
T5001	⚠ 4511 3537	TRANS,POWER,PULSE
T6901	4552 7548	TRANS,IF(VCR 3785CE ONLY)
OR		TRANS,IF(VCR 3785CE ONLY)
OR		TRANS,IF 15.625KHZ(VCR 3785CE ONLY)
(DELAY LINES)		
DL101	4342 1036	DELAY LINE(COMB)
OR		DELAY LINE(COMB)
(CAPACITORS)		
C1001	CERAMIC	22P J 50V
C1002	CERAMIC	220P J 50V
C1003	CERAMIC	82P J 50V
C1005	ELECT	1U M 50V
C1006	CERAMIC	4.7P K 50V
C1007	CERAMIC	390P J 50V
C1008	CERAMIC	22P J 50V
C1009	CERAMIC	4.7P K 50V
C1010	CERAMIC	82P J 50V
C1011	ELECT	1U M 50V
C1012	ELECT	10U M 16V
C1013	ELECT	0.47U M 50V
C1014	CERAMIC	0.01U M 16V
C1015	CERAMIC	0.033U J 16V
C1016	CERAMIC	0.022U J 16V
C1021	CERAMIC	330P J 50V
C1022	CERAMIC	0.1U J 16V
C1023	CERAMIC	68P J 50V
C1028	CERAMIC	0.01U M 16V
C1030	ELECT	1U M 50V
C1031	ELECT	1U M 50V
C1032	CERAMIC	0.047U J 16V
C1033	CERAMIC	0.01U M 16V
C1036	ELECT	1U M 50V
C1037	ELECT	2.2U M 50V
C1038	CERAMIC	0.022U J 16V
C1039	CERAMIC	0.047U J 16V
C1040	CERAMIC	0.01U M 16V
C1041	ELECT	10U M 16V
C1043	CERAMIC	0.1U Z 50V
C1044	ELECT	220U M 6.3V
C1046	ELECT	10U M 16V
C1047	ELECT	10U M 16V
C1048	CERAMIC	0.01U M 16V
C1049	CERAMIC	33P J 50V
C1050	CERAMIC	0.01U M 16V
C1051	CERAMIC	470P J 50V
C1052	CERAMIC	560P J 50V
C1053	CERAMIC	0.01U M 16V
C1058	CERAMIC	27P J 50V
C1060	CERAMIC	27P J 50V
C1061	CERAMIC	22P J 50V
C1062	CERAMIC	180P J 50V
C1081	CERAMIC	82P J 50V
C1091	CERAMIC	0.1U Z 50V
C1093	CERAMIC	0.1U Z 50V
C1094	CERAMIC	0.1U Z 50V
C1096	CERAMIC	0.1U Z 50V
C1097	OS-SOLID	4.7U M 10V
C1101	ELECT	47U M 6.3V
C1102	CERAMIC	0.01U M 16V
C1104	CERAMIC	12P J 50V
C1105	CERAMIC	12P J 50V
C1109	CERAMIC	0.01U M 16V
C1110	ELECT	1U M 50V
C1311	CERAMIC	0.1U Z 50V
C1601	CERAMIC	0.1U Z 50V
C1602	ELECT	470U M 6.3V (VCR 3785UK ONLY)

LOCATION	PARTS NO.	DESCRIPTION			
C1611		ELECT	0.47U	M	50V
		(VCR 3785UK ONLY)			
C1613		CERAMIC	0.047U	Z	16V
		(VCR 3785UK ONLY)			
C1614		ELECT	10U	M	16V
		(VCR 3785UK ONLY)			
C1621		CERAMIC	15P	J	50V
C1622		CERAMIC	15P	J	50V
C1623		ELECT	47U	M	6.3V
C1624		ELECT	47U	M	10V
C1625		ELECT	10U	M	16V
C1627		CERAMIC	1200P	K	16V
C1628		ELECT	1U	M	50V
C1630		CERAMIC	6800P	K	16V
C1631		NP-ELECT	1U	M	50V
C1632		CERAMIC	0.022U	K	16V
C1633		CERAMIC	24P	J	50V
C1634		CERAMIC	10P	J	50V
C1636		CERAMIC	0.01U	M	16V
C1652		CERAMIC	0.1U	Z	50V
C3001		CERAMIC	10P	J	50V
C3002		CERAMIC	20P	J	50V
C3004		CERAMIC	0.01U	M	16V
C3005		CERAMIC	0.01U	M	16V
C3008		ELECT	22U	M	16V
C3009		CERAMIC	0.01U	M	16V
C3010		ELECT	2.2U	M	50V
C3011		CERAMIC	0.1U	Z	50V
C3012		CERAMIC	0.01U	M	16V
C3013		CERAMIC	0.01U	M	16V
C3014		ELECT	470U	M	6.3V
C3016		CERAMIC	0.01U	M	16V
C3017		CERAMIC	1000P	K	50V
		(VCR 3785UK ONLY)			
C3021		CERAMIC	47P	J	50V
C3022		DL-ELECT	0.1F	Z	5.5V
C3023		CERAMIC	12P	J	50V
C3051		CERAMIC	0.1U	Z	50V
		(EXCEPT VCR 3785UK)			
C3053		CERAMIC	0.1U	Z	50V
		(EXCEPT VCR 3785UK)			
C3501		CERAMIC	0.015U	K	16V
C3502		CERAMIC	6800P	K	16V
C3503		CERAMIC	0.015U	K	16V
C3505		ELECT	22U	M	16V
C3506		CERAMIC	6800P	K	16V
C3508		ELECT	22U	M	16V
C3509		ELECT	47U	M	6.3V
C3511		CERAMIC	220P	K	50V
C3512		MT-COMPO	0.039U	J	50V
C3513		CERAMIC	0.068U	K	16V
C3514		POLYESTER	0.15U	K	50V
C3515		POLYESTER	0.022U	K	50V
C3516		CERAMIC	2200P	K	16V
C3517		CERAMIC	1500P	K	16V
C3522		CERAMIC	1000P	K	50V
C3523		ELECT	1U	M	50V
C3524		CERAMIC	0.01U	M	16V
C3525		ELECT	0.47U	M	50V
C3526		MT-POLYEST	0.082U	J	50V
C3530		ELECT	47U	M	6.3V
C3536		ELECT	220U	M	6.3V
C3540		CERAMIC	100P	K	50V
C3551		MT-COMPO	0.12U	J	50V
C3552		CERAMIC	56P	J	50V
C3553		ELECT	1U	M	50V
C3554		CERAMIC	150P	J	50V
C3556		CERAMIC	1000P	K	50V
C3558		ELECT	33U	M	16V
C3570		CERAMIC	0.1U	Z	50V
C5001	⚠ 3261 9057	MT-POLYEST	0.22U	M	250V
C5002	⚠ 3261 9056	MT-POLYEST	0.068U	M	250V
C5005	⚠ 3261 9055	CERAMIC	2200P	M	400V
C5007	⚠ 3261 9055	CERAMIC	2200P	M	400V
C5010		ELECT	47U	M	400V
C5011		POLYESTER	0.1U	K	50V

LOCATION	PARTS NO.	DESCRIPTION			
C5015		POLYESTER	3300P	K	50V
C5017		CERAMIC	390P	J	50V
C5020		CERAMIC	100P	K	1K
C5021		CERAMIC	2200P	K	500V
C5022		CERAMIC	2200P	K	500V
C5023		CERAMIC	47P	J	50V
C5025		CERAMIC	100P	K	1K
C5101		ELECT	1000U	M	6.3V
C5102		ELECT	1000U	M	6.3V
C5105		ELECT	470U	M	16V
C5106		ELECT	1000U	M	16V
C5108		ELECT	22U	M	50V
C5109		ELECT	47U	M	35V
C5110		ELECT	220U	M	6.3V
C5113		ELECT	330U	M	16V
C5115		CERAMIC	0.1U	Z	50V
C5116		ELECT	3.3U	M	50V
C5124		ELECT	0.22U	M	50V
C5135		POLYESTER	0.1U	K	50V
C6004		MT-COMPO	0.1U	J	50V
		(VCR 3785UK ONLY)			
C6005		CERAMIC	0.1U	Z	50V
		(VCR 3785UK ONLY)			
C6006		CERAMIC	0.047U	Z	16V
		(VCR 3785UK ONLY)			
C6007		ELECT	10U	M	16V
C6008		CERAMIC	0.033U	Z	16V
		(VCR 3785NE/SE,3785UK)			
C6009		ELECT	47U	M	16V
C6010		CERAMIC	2200P	M	16V
C6052		CERAMIC	39P	J	50V
C6053		CERAMIC	33P	J	50V
C6054		ELECT	4.7U	M	25V
		(VCR 3785NE/SE,3785UK)			
C6055		ELECT	4.7U	M	25V
		(VCR 3785NE/SE,3785UK)			
C6056		CERAMIC	390P	K	50V
		(VCR 3785NE/SE,3785UK)			
C6081		CERAMIC	0.1U	Z	50V
		(EXCEPT VCR 3785UK)			
C6601		ELECT	10U	M	16V
C6602		ELECT	10U	M	16V
C6901		ELECT	1U	M	50V
		(EXCEPT VCR 3785CE)			
C6902		CERAMIC	0.047U	Z	16V
		(VCR 3785CE ONLY)			
C6903		CERAMIC	0.01U	M	16V
		(EXCEPT VCR 3785CE)			
C6904		ELECT	10U	M	16V
		(VCR 3785CE ONLY)			
C6905		CERAMIC	22P	J	50V
		(VCR 3785UK ONLY)			
OR		CERAMIC	56P	J	50V
		(VCR 3785NE/SE,3785NL)			
C6906		CERAMIC	0.022U	Z	25V
		(VCR 3785CE ONLY)			
C6907		ELECT	1U	M	50V
		(EXCEPT VCR 3785CE)			
OR		ELECT	0.22U	M	50V
		(VCR 3785CE ONLY)			
C6908		CERAMIC	0.1U	Z	50V
		(VCR 3785CE ONLY)			
C6909		ELECT	100U	M	16V
		(VCR 3785NE/SE,3785UK)			
OR		ELECT	100U	M	16V
		(VCR 3785CE,3785NL)			
C6910		CERAMIC	1000P	K	50V
		(EXCEPT VCR 3785CE)			
C6922		ELECT	22U	M	50V
C6924		CERAMIC	180P	K	50V
		(VCR 3785UK ONLY)			
C6925		MT-COMPO	0.33U	J	50V
		(VCR 3785UK ONLY)			
C6926		MT-COMPO	0.22U	J	50V
		(VCR 3785UK ONLY)			

LOCATION	PARTS NO.	DESCRIPTION			
(RESISTORS)					
R1001		CARBON	3.3K	JA	1/4W
R1002		CARBON	1K	JA	1/4W
R1003		CARBON	3.9K	JA	1/4W
R1004		CARBON	1K	JA	1/4W
R1005		CARBON	750	JA	1/4W
R1006		CARBON	430	JA	1/4W
R1007		CARBON	1K	JA	1/4W
R1008		CARBON	2.7K	JA	1/4W
R1009		CARBON	820	JA	1/4W
R1010		CARBON	2.2K	JA	1/4W
R1011		CARBON	100K	JA	1/4W
R1012		CARBON	1K	JA	1/4W
R1013		CARBON	1K	JA	1/4W
R1014		CARBON	2.2K	JA	1/4W
R1019		CARBON	22K	JA	1/4W
R1020		CARBON	12K	JA	1/4W
R1021		CARBON	1K	JA	1/4W
R1022		CARBON	390	JA	1/4W
R1024		CARBON	1K	JA	1/4W
R1026		CARBON	1M	JA	1/4W
R1027		CARBON	8.2K	JA	1/4W
R1028		CARBON	1.8K	JA	1/4W
R1029		CARBON	1K	JA	1/4W
R1032		CARBON	22K	JA	1/4W
R1033		CARBON	1K	JA	1/4W
R1035		CARBON	470	JA	1/4W
R1036		CARBON	1.5K	JA	1/4W
R1038		CARBON	1K	JA	1/4W
R1040		CARBON	150	JA	1/4W
R1044		CARBON	12K	JA	1/4W
R1046		CARBON	33K	JA	1/4W
R1047		CARBON	8.2K	JA	1/4W
R1048		CARBON	4.7K	JA	1/4W
R1049		CARBON	12K	JA	1/4W
R1052		CARBON	1K	JA	1/4W
R1053		CARBON	330	JA	1/4W
R1054		CARBON	3.3K	JA	1/4W
R1058		CARBON	4.7K	JA	1/4W
R1059		CARBON	1.8K	JA	1/4W
R1063		CARBON	22K	JA	1/4W
R1071		CARBON	2.7K	JA	1/4W
R1072		CARBON	1.8K	JA	1/4W
R1105		CARBON	3.9K	JA	1/4W
R1106		CARBON	6.8K	JA	1/4W
R1601		CARBON	560	JA	1/4W
R1602		CARBON (VCR 3785UK ONLY)	75	JA	1/4W
R1603		CARBON	18	JA	1/4W
R1611		CARBON (VCR 3785UK ONLY)	1K	JA	1/4W
R1612		CARBON (VCR 3785UK ONLY)	1K	JA	1/4W
R1614		CARBON (VCR 3785UK ONLY)	1K	JA	1/4W
R1616		CARBON (VCR 3785UK ONLY)	330	JA	1/4W
R1617		CARBON (VCR 3785UK ONLY)	390	JA	1/4W
R1621		CARBON	22K	JA	1/4W
R1622		CARBON	4.3K	JA	1/4W
R1623		CARBON	1.5K	JA	1/4W
R1624		CARBON	10K	JA	1/4W
R1625		CARBON	6.8K	JA	1/4W
R1626		CARBON	100K	JA	1/4W
R1627		CARBON	220	JA	1/4W
R1628		CARBON	100	JA	1/4W
R1629		CARBON	220	JA	1/4W
R1630		CARBON	1.5K	JA	1/4W
R1631		CARBON	6.8K	JA	1/4W
R1632		CARBON	1K	JA	1/4W
R1633		CARBON	1K	JA	1/4W
R1651		CARBON	8.2K	JA	1/4W
R1652		CARBON	12K	JA	1/4W
R1653		CARBON	56	JA	1/4W
R1654		CARBON	27K	JA	1/4W
R1655		CARBON	3K	JA	1/4W
R1656		CARBON	1.2K	JA	1/4W
R1657		CARBON	5.6K	JA	1/4W
R1658		CARBON	5.6K	JA	1/4W
R1659		CARBON	1.2K	JA	1/4W
R1671		CARBON	100	JA	1/4W
R1673		CARBON (VCR 3785UK ONLY)	4.7K	JA	1/4W
R1691		CARBON (EXCEPT VCR 3785UK)	820	JA	1/4W
R1692		CARBON (EXCEPT VCR 3785UK)	820	JA	1/4W
R3001	⚠ 3151 7950	FUSIBLE RES	3.3	JA	1/2W
R3004		CARBON	1.5K	JA	1/4W
R3008		CARBON	4.7K	JA	1/4W
R3009		CARBON	4.7K	JA	1/4W
R3010		CARBON	4.7K	JA	1/4W
R3011		CARBON	47K	JA	1/4W
R3012		CARBON	4.7K	JA	1/4W
R3013		CARBON	4.7K	JA	1/4W
R3014		CARBON	200K	JA	1/4W
R3015		CARBON	200K	JA	1/4W
R3018		CARBON	10K	JA	1/4W
R3019		CARBON	36K	JA	1/4W
R3020		CARBON	10K	JA	1/4W
R3023		CARBON	1K	JA	1/4W
R3024		CARBON	1K	JA	1/4W
R3025		CARBON	1K	JA	1/4W
R3026		CARBON	1K	JA	1/4W
R3032		CARBON	33K	JA	1/4W
R3034		CARBON	12K	JA	1/4W
R3035		CARBON	10K	JA	1/4W
R3036		CARBON	10K	JA	1/4W
R3046		CARBON	4.7K	JA	1/4W
R3047		CARBON	2K	JA	1/4W
R3048		CARBON	1.3K	JA	1/4W
R3049		CARBON	2.7K	JA	1/4W
R3050		CARBON	20K	JA	1/4W
R3051		CARBON	20K	JA	1/4W
R3081		CARBON (EXCEPT VCR 3785UK)	1K	JA	1/4W
R3082		CARBON (EXCEPT VCR 3785UK)	1K	JA	1/4W
R3083		CARBON (EXCEPT VCR 3785UK)	1K	JA	1/4W
R3084		CARBON (EXCEPT VCR 3785UK)	1K	JA	1/4W
R3101		CARBON	100K	JA	1/4W
R3102		CARBON	100K	JA	1/4W
R3103		CARBON	100K	JA	1/4W
R3104		CARBON	100K	JA	1/4W
R3501		CARBON	100K	JA	1/4W
R3502		CARBON	100K	JA	1/4W
R3503		CARBON	330K	JA	1/4W
R3504		CARBON	150K	JA	1/4W
R3505		CARBON	15K	JA	1/4W
R3506		CARBON	220K	JA	1/4W
R3507		CARBON	150K	JA	1/4W
R3508		CARBON	27K	JA	1/4W
R3516		CARBON	9.1K	JA	1/4W
R3517		CARBON	47K	JA	1/4W
R3518		CARBON	47K	JA	1/4W
R3520		CARBON	390K	JA	1/4W
R3521		CARBON	10K	JA	1/4W
R3525		CARBON	1K	JA	1/4W
R3526		CARBON	2.2K	JA	1/4W
R3527		CARBON	1K	JA	1/4W
R3528		CARBON	510	JA	1/4W
R3529		CARBON	510	JA	1/4W
R3533		CARBON	1.5K	JA	1/4W
R3537		CARBON	8.2K	JA	1/4W
R3546		CARBON	4.7K	JA	1/4W
R3547		CARBON	15K	JA	1/4W
R3549		CARBON	10K	JA	1/4W
R3550		CARBON	8.2K	JA	1/4W
R3551		CARBON	10K	JA	1/4W
R3552		CARBON	100K	JA	1/4W
R3553		CARBON	220K	JA	1/4W
R3555		CARBON	100K	JA	1/4W
R3556		CARBON	10K	JA	1/4W

LOCATION	PARTS NO.	DESCRIPTION			
R3557		CARBON	330K	JA	1/4W
R3558		CARBON	470	JA	1/4W
R3560		CARBON	1K	JA	1/4W
R5001		SOLID	2.7M	KB	1/2W
R5002		CARBON	470K	JA	1/4W
R5003		CARBON	470K	JA	1/4W
R5005		CARBON	180K	JA	1/4W
R5006		CARBON	10K	JA	1/4W
R5007		CARBON	10K	JA	1/4W
R5008		CARBON	470K	JA	1/4W
R5009		CARBON	56K	JA	1/4W
R5012		CARBON	1.8K	JA	1/4W
R5014		CARBON	47	JA	1/4W
R5020		CARBON	15K	JA	1/4W
R5021		CARBON	15K	JA	1/4W
R5022		CARBON	15K	JA	1/4W
R5101		CARBON	330	JA	1/4W
R5102		CARBON	470	JA	1/4W
R5103		CARBON	560	JA	1/4W
R5104		CARBON	2.7K	JA	1/4W
R5111		CARBON	560	JA	1/4W
R5112		CARBON	3.6K	JA	1/4W
R5114		CARBON	100	JA	1/4W
R5115		CARBON	750	JA	1/4W
R5116		CARBON	560	JA	1/4W
R5120		CARBON	4.7	JA	1/4W
R5121		CARBON	9.1	JA	1/4W
R5123		CARBON	2.7K	JA	1/4W
R5135		CARBON	680	JA	1/4W
R6001		CARBON	390K	JA	1/4W
R6002		CARBON	270K	JA	1/4W
R6003		CARBON	390K	JA	1/4W
		(VCR 3785UK ONLY)			
R6004		CARBON	470K	JA	1/4W
		(VCR 3785UK ONLY)			
R6006		CARBON	3.3K	JA	1/4W
		(VCR 3785NE/SE,3785UK)			
R6008		CARBON	1M	JA	1/4W
		(VCR 3785UK ONLY)			
R6009		CARBON	4.7K	JA	1/4W
		(VCR 3785NE/SE,3785UK)			
R6051		CARBON	560	JA	1/4W
R6052		CARBON	1.8K	JA	1/4W
R6053		CARBON	1K	JA	1/4W
R6054		CARBON	820	JA	1/4W
R6055		CARBON	5.6K	JA	1/4W
R6056		CARBON	1.8K	JA	1/4W
R6057		CARBON	1.3K	JA	1/4W
R6061		CARBON	100K	JA	1/4W
		(VCR 3785NE/SE,3785UK)			
R6062		CARBON	91K	JA	1/4W
		(VCR 3785NE/SE,3785UK)			
R6063		CARBON	91K	JA	1/4W
		(VCR 3785NE/SE,3785UK)			
R6064		CARBON	2.2K	JA	1/4W
		(VCR 3785NE/SE,3785UK)			
R6065		CARBON	10K	JA	1/4W
		(VCR 3785NE/SE,3785UK)			
R6071	⚠ 3151 7808	FUSIBLE RES	680	GA	1/4W
R6691		CARBON	2.2K	JA	1/4W
R6692		CARBON	3.3K	JA	1/4W
R6901		CARBON	100	JA	1/4W
R6902		CARBON	1K	JA	1/4W
R6903		CARBON	330	JA	1/4W
		(VCR 3785CE ONLY)			
OR		CARBON	100K	JA	1/4W
		(EXCEPT VCR 3785CE)			
R6904		CARBON	10K	JA	1/4W
		(VCR 3785CE ONLY)			
R6905		CARBON	470	JA	1/4W
		(VCR 3785CE ONLY)			
OR		CARBON	680	JA	1/4W
		(EXCEPT VCR 3785CE)			
R6906		CARBON	330K	JA	1/4W
		(VCR 3785CE ONLY)			
OR		CARBON	390K	JA	1/4W
		(EXCEPT VCR 3785CE)			

LOCATION	PARTS NO.	DESCRIPTION			
R6907		CARBON	10K	JA	1/4W
		(VCR 3785CE ONLY)			
R6908		CARBON	82	JA	1/4W
		(VCR 3785CE ONLY)			
R6909		CARBON	1K	JA	1/4W
		(EXCEPT VCR 3785CE)			
OR		CARBON	3.3K	JA	1/4W
		(VCR 3785CE ONLY)			
R6910		CARBON	1K	JA	1/4W
		(VCR 3785CE ONLY)			
OR		CARBON	27K	JA	1/4W
		(EXCEPT VCR 3785CE)			
R6911		CARBON	1K	JA	1/4W
		(EXCEPT VCR 3785CE)			
OR		CARBON	510	JA	1/4W
		(VCR 3785CE ONLY)			
R6914		CARBON	5.6K	JA	1/4W
R6915		CARBON	3.9K	JA	1/4W
R6916		CARBON	100	JA	1/4W
R6921		CARBON	1K	JA	1/4W
		(EXCEPT VCR 3785UK)			
OR		CARBON	33K	JA	1/4W
		(VCR 3785UK ONLY)			
R6922		CARBON	10K	JA	1/4W
		(VCR 3785UK ONLY)			
R6923		CARBON	10K	JA	1/4W
		(VCR 3785UK ONLY)			
R6924		CARBON	18K	JA	1/4W
		(VCR 3785UK ONLY)			
R6925		CARBON	15K	JA	1/4W
		(VCR 3785UK ONLY)			
R6926		CARBON	12K	JA	1/4W
		(VCR 3785UK ONLY)			
R6927		CARBON	120	JA	1/4W
		(VCR 3785UK ONLY)			

(SWITCHES)

S3101		SW,PUSH,REW
OR	4112 7524	SWITCH,PUSH,REW
S3102		SW,PUSH,PLAY
OR	4112 7524	SWITCH,PUSH,PLAY
S3103		SW,PUSH,REC
OR	4112 7524	SWITCH,PUSH,REC
S3104		SW,PUSH,EJECT
OR	4112 7524	SWITCH,PUSH,EJECT
S3105		SW,PUSH,FF
OR	4112 7524	SWITCH,PUSH,FF
S3106		SW,PUSH,STOP
OR	4112 7524	SWITCH,PUSH,STOP
S3107		SW,PUSH,PAUSE/WIDE ASO
OR	4112 7524	SWITCH,PUSH,PAUSE/WIDE ASO
S3108		SW,PUSH,POWER
OR	4112 7524	SWITCH,PUSH,POWER
S3117		SW,PUSH,CH +
OR	4112 7524	SWITCH,PUSH,CH +
S3118		SW,PUSH,CH -
OR	4112 7524	SWITCH,PUSH,CH -

(FUSE)

F5001	⚠ 3151 7951	FUSE 250V 2.5A

(PROTECTOR)

PR511	⚠ 4375 2140	CIRCUIT PROTECTOR

(CONNECTOR)

CN501	⚠ 4144 8389	SOCKET,INLET AC

(MISCELLANEOUS)

	8681 4390	FIXER
	8681 4987	HOLDER,FUSE,F5001
OR	8681 4988	HOLDER,FUSE,F5001

LOCATION	PARTS NO.	DESCRIPTION
COMPL PWB,VP-1		
COMPLNO.6913 4655		
(SEMICONDUCTORS)		
Q1802	3614 4466	TR 2SC2412K-R
OR	3614 5272	TR 2SC2412K-S
OR	3614 4383	TR 2SC2812-L5
OR	3614 4635	TR 2SC2812-L6
Q1850	3614 5266	TR 2SA1037K-R
OR		TR 2SA1037K-S
OR	3614 4364	TR 2SA1179-M5
OR	3614 4364	TR 2SA1179-M6
Q1851	3614 7517	TR 2SC2413K-Q
OR	3614 4334	TR 2SC2814-F4
OR	3614 4382	TR 2SC2814-F5
Q1852	3614 5266	TR 2SA1037K-R
OR		TR 2SA1037K-S
OR	3614 4364	TR 2SA1179-M5
OR	3614 4364	TR 2SA1179-M6
Q2901	3614 4466	TR 2SC2412K-R
OR	3614 5272	TR 2SC2412K-S
OR	3614 4383	TR 2SC2812-L5
OR	3614 4635	TR 2SC2812-L6
(INTEGRATED CIRCUITS)		
IC181	3771 6590	IC LA7374
IC191	3771 6756	IC TEA5750
IC291	3771 6747	IC LA7270
(DIODES)		
D1801	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1901	3656 3655	ZENER DIODE GZS3.9X
OR	3656 3674	ZENER DIODE MTZJ3.9A
(VARIABLE RESISTORS)		
VR181	3111 8928	SEMI VR 1KB
OR		VR,SEMI 1KB
VR182	3111 8971	SEMI VR 2.2KB
OR	3112 9636	VR,SEMI 2.2KB
(INDUCTORS)		
L1831	4543 8766	COIL,INDUCTOR 6.8UHK
OR		HF CHOKE 6.8UHK
L1832	4543 2230	COIL,INDUCTOR 18UHK
OR		HF CHOKE 18UHK
L1834	4543 1960	COIL,INDUCTOR 180UHK
OR		HF CHOKE 180UHK
L1851	4543 2199	COIL,INDUCTOR 100UHK
OR		HF CHOKE 101UHK
L1852	4543 3251	COIL,INDUCTOR 68UHK
OR		HF CHOKE 68UHK
L1901	4543 1949	COIL,INDUCTOR 47UHJ
L1902	4543 1949	COIL,INDUCTOR 47UHJ
L1903	4543 4007	COIL,INDUCTOR 120UHJ
L1931	4543 3251	COIL,INDUCTOR 68UHK
OR		HF CHOKE 68UHK
(CAPACITORS)		
C1801		OS-SOLID 4.7U M 10V
C1802		CERAMIC 0.1U Z 25V
C1803		CERAMIC 0.015U K 50V
C1804		CERAMIC 0.01U K 50V
C1805		ELECT 0.33U M 50V
C1806		CERAMIC 0.01U K 50V
C1808		CERAMIC 0.01U K 50V
C1809		CERAMIC 0.01U K 50V
C1810		CERAMIC 0.01U K 50V
C1811		CERAMIC 0.01U K 50V
C1812		CERAMIC 0.01U K 50V
C1813		CERAMIC 0.01U K 50V
C1814		CERAMIC 0.01U K 50V
C1815		CERAMIC 0.1U Z 25V
C1816		CERAMIC 0.1U Z 25V

LOCATION	PARTS NO.	DESCRIPTION
C1817		CERAMIC 0.1U Z 25V
C1818		CERAMIC 0.1U Z 25V
C1831		CERAMIC 47P J 50V
C1832		CERAMIC 180P J 50V
C1834		CERAMIC 330P J 50V
C1851		CERAMIC 390P J 50V
C1852		CERAMIC 330P J 50V
C1853		CERAMIC 22P J 50V
C1855		CERAMIC 82P J 50V
C1861		CERAMIC 0.1U Z 25V
C1862		ELECT 47U M 6.3V
C1867		CERAMIC 47P J 50V
C1901		CERAMIC 220P J 50V
C1902		CERAMIC 100P J 50V
C1903		CERAMIC 0.01U K 50V
C1904		CERAMIC 39P J 50V
C1905		CERAMIC 0.01U K 50V
C1906		CERAMIC 0.01U K 50V
C1909		OS-SOLID 1U M 25V
C2901		ELECT 47U M 6.3V
C2902		CERAMIC 0.1U Z 25V
C2903		CERAMIC 0.1U Z 25V
C2904		CERAMIC 0.1U Z 25V
C2905		ELECT 47U M 16V
C2906		CERAMIC 0.1U Z 25V
C2907		CERAMIC 0.1U Z 25V
C2908		ELECT 0.1U M 50V
C2909		CERAMIC 0.1U Z 25V
C2910		CERAMIC 0.1U Z 25V
C2911		CERAMIC 0.1U Z 25V
C2912		CERAMIC 0.1U Z 25V
C2913		CERAMIC 0.1U Z 25V
(RESISTORS)		
R1801		MT-GLAZE 5.6K JA 1/10W
R1802		MT-GLAZE 12K JA 1/10W
R1803		MT-GLAZE 22K JA 1/10W
R1805		MT-GLAZE 22K JA 1/10W
R1806		MT-GLAZE 1K JA 1/10W
R1807		MT-GLAZE 470 JA 1/10W
R1808		MT-GLAZE 2.2K JA 1/10W
R1809		MT-GLAZE 1.2K JA 1/10W
R1810		MT-GLAZE 1K JA 1/10W
R1811		MT-GLAZE 1.3K JA 1/10W
R1812		MT-GLAZE 5.6K JA 1/10W
R1813		MT-GLAZE 5.6K JA 1/10W
R1814		MT-GLAZE 33K JA 1/10W
R1815		MT-GLAZE 33K JA 1/10W
R1816		MT-GLAZE 2.2K JA 1/10W
R1817		MT-GLAZE 2.2K JA 1/10W
R1831		MT-GLAZE 470 JA 1/10W
R1832		MT-GLAZE 1K JA 1/10W
R1850		MT-GLAZE 1.8K JA 1/10W
R1851		MT-GLAZE 330 JA 1/10W
R1852		MT-GLAZE 22K JA 1/10W
R1853		MT-GLAZE 22K JA 1/10W
R1854		MT-GLAZE 390 JA 1/10W
R1855		MT-GLAZE 390 JA 1/10W
R1856		MT-GLAZE 1.8K JA 1/10W
R1860		MT-GLAZE 470 JA 1/10W
R1869		MT-GLAZE 1.8K JA 1/10W
R1901		MT-GLAZE 22K JA 1/10W
R1902		MT-GLAZE 27K JA 1/10W
R1903		MT-GLAZE 1K JA 1/10W
R1904		MT-GLAZE 100 JA 1/10W
R1905		MT-GLAZE 820 JA 1/10W
R1906		MT-GLAZE 2.7K JA 1/10W
R1907		MT-GLAZE 1M JA 1/10W
R1908		MT-FILM 1.2K FD 1/4W
R1909		MT-FILM 1.1K FD 1/4W
R1931		MT-GLAZE 150 JA 1/10W
R1932		MT-GLAZE 82 JA 1/10W
R2901		MT-GLAZE 4.7 JA 1/10W
R2902		MT-GLAZE 10 JA 1/10W
R2903		MT-GLAZE 180 JA 1/10W

LOCATION	PARTS NO.	DESCRIPTION			
R2904		MT-GLAZE	120	JA	1/10W
R2905		MT-GLAZE	1K	JA	1/10W
R2906		MT-GLAZE	2.2K	JA	1/10W
R2907		MT-GLAZE	180	JA	1/10W
R2908		MT-GLAZE	1K	JA	1/10W
(JUMPER)					
J1851		MT-GLAZE 0.000 ZA 1/10W			

COMPL PWB,TM-1

COMPLNO.6913 4631

(REMOTE RECEIVERS)			
RR701	6913 6685	IR RECEIVER	PACK UNIT
OR		IR RECEIVER	PACK UNIT
(DISPLAYS)			
A7001	3686 1176	FLUORESCENT TUBE	
OR		FLUORESCENT TUBE	
(MISCELLANEOUS)			
	8681 5261	HOLDER FL	

COMPL PWB,TM-7

COMPLNO.6913 4634 (EXCEPT VCR 3785CE)

(INTEGRATED CIRCUIT)					
IC771	3771 6949	IC MV1821C			
(CRYSTAL DEVICE)					
X7701	4421 2271	OSC,CRYSTAL 6.9375MHZ			
(INDUCTORS)					
L7701	4543 1989	COIL,INDUCTOR 10UHK			
OR		HF CHOKE 10UHK			
(CAPACITORS)					
C7701		ELECT	1U	M	50V
C7702		CERAMIC	0.22U	Z	16V
C7703		MT-COMPO	0.22U	J	50V
C7705		CERAMIC	27P	J	50V
C7706		CERAMIC	27P	J	50V
C7707		CERAMIC	100P	J	50V
C7708		CERAMIC	0.1U	Z	25V
(RESISTOR)					
R7702		MT-GLAZE	0.000	ZA	1/10W

COMPL PCB,TM-8

COMPLNO.6913 0957 (VCR 3785CE ONLY)

(INTEGRATED CIRCUITS)					
IC781	3771 5597	IC SDA5642			
OR		IC SDA5642-5			
(CAPACITORS)					
C7802		CERAMIC	150P	J	50V
C7803		MT-COMPO	0.33U	J	50V
C7804		POLYESTER	0.1U	J	50V
(RESISTORS)					
R7805		MT-GLAZE	2.2K	JA	1/10W
R7806		MT-GLAZE	1M	JA	1/10W
R7807		MT-GLAZE	820K	JA	1/10W
R7808		MT-GLAZE	100K	JA	1/10W
R7809		MT-GLAZE	10K	JA	1/10W
R7810		MT-GLAZE	1.2M	JA	1/10W
R7811		MT-GLAZE	100	JA	1/10W
R7812		MT-GLAZE	5.6K	JA	1/10W

COMPL PWB,TB-1

COMPLNO.6913 4665 (VCR 3785UK ONLY)
COMPLNO.6913 4656 (EXCEPT VCR 3785UK)

(SEMICONDUCTORS)		
Q8601	3614 4690	TR KSA1175-Y(EXCEPT VCR 3785UK)
OR	3614 4942	TR 2SA608-E-SPA(EXCEPT VCR 3785UK)
OR	3614 5281	TR 2SA608-F-SPA(EXCEPT VCR 3785UK)
OR	3614 4542	TR 2SA933S-Q(EXCEPT VCR 3785UK)
OR	3614 5540	TR 2SA933S-R(EXCEPT VCR 3785UK)
Q8602	3614 4690	TR KSA1175-Y(EXCEPT VCR 3785UK)
OR	3614 4942	TR 2SA608-E-SPA(EXCEPT VCR 3785UK)
OR	3614 5281	TR 2SA608-F-SPA(EXCEPT VCR 3785UK)
OR	3614 4542	TR 2SA933S-Q(EXCEPT VCR 3785UK)
OR	3614 5540	TR 2SA933S-R(EXCEPT VCR 3785UK)
Q8603	3614 4469	TR DTC144EK(EXCEPT VCR 3785UK)
OR	3614 4359	TR 2SC3395(EXCEPT VCR 3785UK)
Q8604	3614 4469	TR DTC144EK(EXCEPT VCR 3785UK)
OR	3614 4359	TR 2SC3395(EXCEPT VCR 3785UK)
Q8605	3614 5266	TR 2SA1037K-R(EXCEPT VCR 3785UK)
OR		TR 2SA1037K-S(EXCEPT VCR 3785UK)
OR	3614 4364	TR 2SA1179-M5(EXCEPT VCR 3785UK)
OR	3614 4364	TR 2SA1179-M6(EXCEPT VCR 3785UK)
(INTEGRATED CIRCUITS)		
IC851	3771 6592	IC TC4053BF(EXCEPT VCR 3785UK)
IC852	3771 6592	IC TC4053BF(EXCEPT VCR 3785UK)
IC862	3771 6532	IC BA7630S(EXCEPT VCR 3785UK)
(DIODES)		
D8604	3656 2770	DIODE GMA01(EXCEPT VCR 3785UK)
OR	3656 2230	DIODE 1SS133(EXCEPT VCR 3785UK)
D8605	3656 2770	DIODE GMA01(EXCEPT VCR 3785UK)
OR	3656 2230	DIODE 1SS133(EXCEPT VCR 3785UK)
D8606	3656 2770	DIODE GMA01(EXCEPT VCR 3785UK)
OR	3656 2230	DIODE 1SS133(EXCEPT VCR 3785UK)
D8607	3656 2770	DIODE GMA01(EXCEPT VCR 3785UK)
OR	3656 2230	DIODE 1SS133(EXCEPT VCR 3785UK)
D8608	3656 3392	ZENER DIODE GZS5.6X (EXCEPT VCR 3785UK)
OR	3656 3081	ZENER DIODE MTZ5.6B (EXCEPT VCR 3785UK)
D8609	3656 3392	ZENER DIODE GZS5.6X (EXCEPT VCR 3785UK)
OR	3656 3081	ZENER DIODE MTZ5.6B (EXCEPT VCR 3785UK)
D8610	3656 3392	ZENER DIODE GZS5.6X (EXCEPT VCR 3785UK)
OR	3656 3081	ZENER DIODE MTZ5.6B (EXCEPT VCR 3785UK)
D8611	3656 3392	ZENER DIODE GZS5.6X (EXCEPT VCR 3785UK)
OR	3656 3081	ZENER DIODE MTZ5.6B (EXCEPT VCR 3785UK)
D8612	3656 3060	ZENER DIODE GZS15Y (EXCEPT VCR 3785UK)
OR	3656 3575	ZENER DIODE MTZJ15B (EXCEPT VCR 3785UK)
D8697	3656 3060	ZENER DIODE GZS15Y
OR	3656 3575	ZENER DIODE MTZJ15B

(CAPACITORS)					
C8502		CERAMIC	220P	J	50V
C8504		CERAMIC	220P	J	50V
C8506		CERAMIC	1000P	K	50V
C8508		CERAMIC	1000P	K	50V
C8511		CERAMIC (EXCEPT VCR 3785UK)	1000P	K	50V
C8513		CERAMIC	220P	J	50V
C8522		CERAMIC	220P	J	50V
C8524		CERAMIC	220P	J	50V
C8526		CERAMIC	1000P	K	50V
C8528		CERAMIC	1000P	K	50V
C8531		CERAMIC (EXCEPT VCR 3785UK)	1000P	K	50V
C8533		CERAMIC	220P	J	50V
C8551		ELECT (EXCEPT VCR 3785UK)	4.7U	M	25V
C8552		ELECT (EXCEPT VCR 3785UK)	47U	M	16V
C8601		ELECT (EXCEPT VCR 3785UK)	10U	M	16V
C8602		ELECT	10U	M	16V
C8603		CERAMIC (EXCEPT VCR 3785UK)	47P	J	50V
C8605		CERAMIC (EXCEPT VCR 3785UK)	0.1U	Z	50V
C8606		ELECT (EXCEPT VCR 3785UK)	47U	M	16V

LOCATION	PARTS NO.	DESCRIPTION			
C8607		CERAMIC (EXCEPT VCR 3785UK)	0.01U	K	50V
C8608		ELECT (EXCEPT VCR 3785UK)	47U	M	6.3V
C8609		ELECT (EXCEPT VCR 3785UK)	470U	M	6.3V
C8610		NP-ELECT (EXCEPT VCR 3785UK)	0.47U	M	50V
C8611		NP-ELECT (EXCEPT VCR 3785UK)	0.47U	M	50V
(RESISTORS)					
R8501		MT-GLAZE	1K	JA	1/10W
R8502		MT-GLAZE	470	JA	1/10W
R8503		MT-GLAZE	1K	JA	1/10W
R8504		MT-GLAZE	1K	JA	1/10W
R8505		MT-GLAZE (EXCEPT VCR 3785UK)	220K	JA	1/10W
R8508		MT-GLAZE	470	JA	1/10W
R8509		MT-GLAZE (EXCEPT VCR 3785UK)	1K	JA	1/10W
R8510		MT-GLAZE (EXCEPT VCR 3785UK)	220K	JA	1/10W
R8521		MT-GLAZE	1K	JA	1/10W
R8522		MT-GLAZE	470	JA	1/10W
R8523		MT-GLAZE	1K	JA	1/10W
R8524		MT-GLAZE	1K	JA	1/10W
R8525		MT-GLAZE (EXCEPT VCR 3785UK)	220K	JA	1/10W
R8528		MT-GLAZE	470	JA	1/10W
R8529		MT-GLAZE (EXCEPT VCR 3785UK)	1K	JA	1/10W
R8530		MT-GLAZE (EXCEPT VCR 3785UK)	220K	JA	1/10W
R8551		MT-GLAZE (EXCEPT VCR 3785UK)	1K	JA	1/10W
R8552		MT-GLAZE (EXCEPT VCR 3785UK)	10K	JA	1/10W
R8553		MT-GLAZE (EXCEPT VCR 3785UK)	2.7K	JA	1/10W
R8554		MT-GLAZE (EXCEPT VCR 3785UK)	1K	JA	1/10W
R8555		MT-GLAZE (EXCEPT VCR 3785UK)	1K	JA	1/10W
R8602		MT-GLAZE	75	JA	1/10W
R8603		MT-GLAZE	75	JA	1/10W
R8606		CARBON (EXCEPT VCR 3785UK)	820	JA	1/4W
R8607		CARBON (EXCEPT VCR 3785UK)	820	JA	1/4W
R8608		MT-GLAZE (EXCEPT VCR 3785UK)	39	JA	1/10W
R8609		MT-GLAZE (EXCEPT VCR 3785UK)	33	JA	1/10W
R8610		CARBON (EXCEPT VCR 3785UK)	820	JA	1/4W
R8611		CARBON (EXCEPT VCR 3785UK)	820	JA	1/4W
R8612		MT-GLAZE (EXCEPT VCR 3785UK)	39	JA	1/10W
R8613		MT-GLAZE (EXCEPT VCR 3785UK)	33	JA	1/10W
R8614		MT-GLAZE (EXCEPT VCR 3785UK)	100	JA	1/10W
R8615		MT-GLAZE (EXCEPT VCR 3785UK)	100	JA	1/10W
R8616		MT-GLAZE (EXCEPT VCR 3785UK)	4.7K	JA	1/10W
R8617		MT-GLAZE (EXCEPT VCR 3785UK)	4.7K	JA	1/10W
R8618		MT-GLAZE (EXCEPT VCR 3785UK)	4.7K	JA	1/10W
R8619		MT-GLAZE (EXCEPT VCR 3785UK)	4.7K	JA	1/10W
R8620		MT-GLAZE (EXCEPT VCR 3785UK)	1K	JA	1/10W
R8621		MT-GLAZE (EXCEPT VCR 3785UK)	1K	JA	1/10W
R8623		MT-GLAZE (EXCEPT VCR 3785UK)	47K	JA	1/10W
R8624		MT-GLAZE (EXCEPT VCR 3785UK)	2.2K	JA	1/10W
R8625		MT-GLAZE (EXCEPT VCR 3785UK)	4.7K	JA	1/10W
R8626		MT-GLAZE (EXCEPT VCR 3785UK)	330	JA	1/10W
R8627		MT-GLAZE (EXCEPT VCR 3785UK)	390	JA	1/10W
R8628		MT-GLAZE (EXCEPT VCR 3785UK)	4.7K	JA	1/10W
R8630		MT-GLAZE (EXCEPT VCR 3785UK)	13K	JA	1/10W
R8631		MT-GLAZE (EXCEPT VCR 3785UK)	9.1K	JA	1/10W
(JUMPERS)					
J8515		MT-GLAZE 0.000 ZA 1/10W (EXCEPT VCR 3785UK)			
J8679		MT-GLAZE 0.000 ZA 1/10W (EXCEPT VCR 3785UK)			
J8680		MT-GLAZE 0.000 ZA 1/10W (VCR 3785UK ONLY)			
J8681		MT-GLAZE 0.000 ZA 1/10W			
J8682		MT-GLAZE 0.000 ZA 1/10W			
J8683		MT-GLAZE 0.000 ZA 1/10W			
J8684		MT-GLAZE 0.000 ZA 1/10W			
J8685		MT-GLAZE 0.000 ZA 1/10W			
(JACKS)					
JK851		SOCKET			
JK852		SOCKET			
JK853		SOCKET			
JK854		SOCKET			
(CONNECTORS)					
CN871		SOCKET,RGB	21P		
OR		SOCKET,21P			
CN872		SOCKET,RGB	21P		
OR		SOCKET,21P			

COMPL PWB,TN-3

COMPLNO.6913 4663 (VCR 3785CE,3785NL)

LOCATION	PARTS NO.	DESCRIPTION			
(SEMICONDUCTORS)					
Q6301	3614 5227	TR DTC144ES			
OR	3614 5279	TR 2SC3399			
(INTEGRATED CIRCUITS)					
IC631		IC TDA8415			
OR	3771 6758	IC TDA8417			
IC632	3771 5893	IC UPC1391HAMS			
(CRYSTAL DEVICE)					
X6301	4421 2239	OSC,CRYSTAL 10MHZ			
(CERAMIC RESONATORS)					
XF631	4552 7401	FILTER 5.742MHZ			
XF632	4552 7567	FILTER,5.74MHZ B.P			
(VARIABLE RESISTORS)					
VR631	3111 9189	SEMI VR 22KB			
OR		VR,SEMI 22KB			
(CAPACITORS)					
C6301		ELECT	100U	M	16V
C6302		CERAMIC	0.01U	M	16V
C6303		ELECT	10U	M	50V
C6304		ELECT	2.2U	M	50V
C6305		ELECT	4.7U	M	25V
C6306		ELECT	4.7U	M	25V
C6307		ELECT	0.22U	M	50V
C6308		CERAMIC	0.01U	M	16V
C6309		CERAMIC	0.01U	M	16V
C6312		CERAMIC	0.01U	M	16V
C6313		CERAMIC	82P	J	50V
C6314		ELECT	10U	M	50V

LOCATION	PARTS NO.	DESCRIPTION
(RESISTORS)		
R6301		CARBON 4.7K JA 1/4W
R6302		CARBON 470 JA 1/4W
R6303		CARBON 330 JA 1/4W
R6304		CARBON 330 JA 1/4W
R6305		CARBON 22K JA 1/4W
R6309		CARBON 560 JA 1/4W
R6313		CARBON 12K JA 1/4W
R6314		CARBON 8.2K JA 1/4W
R6315		CARBON 10K JA 1/4W
R6316		CARBON 1K JA 1/4W
R6317		CARBON 1K JA 1/4W

COMPL PWB,TN-5

COMPLNO.6913 4664 (VCR 3785UK ONLY)
COMPLNO.6913 4652 (VCR 3785NE/SE ONLY)

(SEMICONDUCTORS)		
Q6701	3614 4466	TR 2SC2412K-R(VCR 3785NE/SE,3785UK)
OR	3614 5272	TR 2SC2412K-S(VCR 3785NE/SE,3785UK)
OR	3614 4383	TR 2SC2812-L5(VCR 3785NE/SE,3785UK)
OR	3614 4635	TR 2SC2812-L6(VCR 3785NE/SE,3785UK)
(INTEGRATED CIRCUITS)		
IC671	3771 6954	IC TB1212F(VCR 3785NE/SE,3785UK)
IC672	3771 6955	IC TA2047F(VCR 3785NE/SE,3785UK)
(CRYSTAL DEVICES)		
X6701	4421 8808	OSC,CRYSTAL 11.648MHZ (VCR 3785NE/SE,3785UK)
X6702	4421 2338	OSC CRYSTAL,5.85MHZ (VCR 3785NE/SE ONLY)
OR	4421 2384	OSC CRYSTAL,6.552MHZ (VCR 3785UK ONLY)
(CERAMIC RESONATORS)		
XF671	4552 7519	FILTER,5.85MHZ(VCR 3785NE/SE ONLY)
OR	4552 6980	FILTER,5.85MHZ B.P.F (VCR 3785NE/SE ONLY)
OR	4552 6935	FILTER,6.552MHZ(VCR 3785UK ONLY)
OR	4552 6979	FILTER,6.552MHZ B.P.F (VCR 3785UK ONLY)
XF672	4552 6822	TRAP,CERAMIC 5.5MHZ (VCR 3785NE/SE ONLY)
OR	4552 6842	TRAP,CERAMIC 6.0MHZ (VCR 3785UK ONLY)
(INDUCTORS)		
L6701	4543 3610	COIL,INDUCTOR 2.2UHJ (VCR 3785NE/SE,3785UK)
OR		HF CHOKE 2.2UHJ (VCR 3785NE/SE,3785UK)
L6702	4543 3610	COIL,INDUCTOR 2.2UHJ (VCR 3785NE/SE,3785UK)
OR		HF CHOKE 2.2UHJ (VCR 3785NE/SE,3785UK)
L6703	4543 3610	COIL,INDUCTOR 2.2UHJ (VCR 3785NE/SE,3785UK)
OR		HF CHOKE 2.2UHJ (VCR 3785NE/SE,3785UK)
L6731	4543 2211	COIL,INDUCTOR 15UHJ (VCR 3785UK ONLY)
OR		HF CHOKE(VCR 3785UK ONLY)
(CAPACITORS)		
C6701		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6702		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6703		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6704		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6705		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6706		ELECT 10U M 16V (VCR 3785NE/SE,3785UK)
C6707		CERAMIC 5P C 50V (VCR 3785NE/SE,3785UK)
C6708		CERAMIC 33P J 50V (VCR 3785NE/SE,3785UK)
C6709		CERAMIC 18P J 50V (VCR 3785NE/SE,3785UK)
C6710		CERAMIC 33P J 50V (VCR 3785NE/SE,3785UK)
C6711		MT-COMPO 0.47U J 50V (VCR 3785NE/SE,3785UK)
C6712		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6713		ELECT 0.47U M 50V (VCR 3785NE/SE,3785UK)
C6714		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6715		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6716		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6717		ELECT 0.47U M 50V (VCR 3785NE/SE,3785UK)
C6718		CERAMIC 24P J 50V (VCR 3785NE/SE,3785UK)
C6719		CERAMIC 12P J 50V (VCR 3785NE/SE,3785UK)
C6720		CERAMIC 680P J 50V (VCR 3785NE/SE,3785UK)
C6721		CERAMIC 680P J 50V (VCR 3785NE/SE,3785UK)
C6722		CERAMIC 0.1U Z 50V (VCR 3785NE/SE,3785UK)
C6723		CERAMIC 0.1U Z 50V (VCR 3785NE/SE,3785UK)
C6724		MT-COMPO 0.15U J 50V (VCR 3785NE/SE,3785UK)
C6725		CERAMIC 2200P K 50V (VCR 3785NE/SE,3785UK)
C6726		ELECT 10U M 16V (VCR 3785NE/SE,3785UK)
C6727		ELECT 10U M 16V (VCR 3785NE/SE,3785UK)
C6728		CERAMIC 3300P K 50V (VCR 3785NE/SE,3785UK)
C6729		ELECT 10U M 16V (VCR 3785NE/SE,3785UK)
C6731		ELECT 100U M 16V (VCR 3785NE/SE,3785UK)
C6732		CERAMIC 0.1U Z 50V (VCR 3785NE/SE,3785UK)
C6733		ELECT 10U M 16V (VCR 3785NE/SE,3785UK)
C6734		CERAMIC 3300P K 50V (VCR 3785NE/SE,3785UK)
C6735		ELECT 10U M 16V (VCR 3785NE/SE,3785UK)
C6736		CERAMIC 2200P K 50V (VCR 3785NE/SE,3785UK)
C6737		MT-COMPO 0.15U J 50V (VCR 3785NE/SE,3785UK)
C6738		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6739		ELECT 100U M 16V (VCR 3785NE/SE,3785UK)
C6740		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6741		ELECT 100U M 6.3V (VCR 3785NE/SE,3785UK)
C6742		CERAMIC 0.01U K 50V (VCR 3785NE/SE,3785UK)
C6743		ELECT 100U M 6.3V (VCR 3785NE/SE,3785UK)
(RESISTORS)		
R6701		MT-GLAZE 390 JA 1/10W (VCR 3785NE/SE,3785UK)
R6702		MT-GLAZE 2.7K JA 1/10W (VCR 3785NE/SE,3785UK)
R6703		MT-GLAZE 10K JA 1/10W (VCR 3785NE/SE,3785UK)

LOCATION	PARTS NO.	DESCRIPTION
R6704		MT-GLAZE 2.2K JA 1/10W (VCR 3785NE/SE,3785UK)
R6705		MT-GLAZE 100 JA 1/10W (VCR 3785NE/SE,3785UK)
R6706		MT-GLAZE 270 JA 1/10W (VCR 3785NE/SE,3785UK)
R6707		MT-GLAZE 82 JA 1/10W (VCR 3785NE/SE,3785UK)
R6708		MT-GLAZE 680 JA 1/10W (VCR 3785NE/SE,3785UK)
R6709		MT-GLAZE 10K JA 1/10W (VCR 3785NE/SE,3785UK)
R6710		MT-GLAZE 220 JA 1/10W (VCR 3785NE/SE,3785UK)
R6711		MT-GLAZE 680 JA 1/10W (VCR 3785NE/SE,3785UK)
R6712		MT-GLAZE 39K JA 1/10W (VCR 3785NE/SE,3785UK)
R6713		MT-GLAZE 220K JA 1/10W (VCR 3785NE/SE,3785UK)
R6714		MT-GLAZE 1.8K JA 1/10W (VCR 3785NE/SE,3785UK)
R6715		MT-GLAZE 39K JA 1/10W (VCR 3785NE/SE,3785UK)
R6716		MT-GLAZE 330 JA 1/10W (VCR 3785NE/SE,3785UK)
R6717		MT-GLAZE 560 JA 1/10W (VCR 3785NE/SE,3785UK)
R6718		MT-GLAZE 2K JA 1/10W (VCR 3785NE/SE,3785UK)
R6719		MT-GLAZE 1K JA 1/10W (VCR 3785NE/SE,3785UK)
R6720		MT-GLAZE 12K JA 1/10W (VCR 3785NE/SE,3785UK)
R6721		MT-GLAZE 18K JA 1/10W (VCR 3785NE/SE,3785UK)
R6722		MT-GLAZE 18K JA 1/10W (VCR 3785NE/SE,3785UK)
R6723		MT-GLAZE 12K JA 1/10W (VCR 3785NE/SE,3785UK)
R6724		MT-GLAZE 1K JA 1/10W (VCR 3785NE/SE,3785UK)
R6725		MT-GLAZE 2K JA 1/10W (VCR 3785NE/SE,3785UK)
R6726		MT-GLAZE 560 JA 1/10W (VCR 3785NE/SE,3785UK)
R6727		MT-GLAZE 330 JA 1/10W (VCR 3785NE/SE,3785UK)
R6728		MT-GLAZE 5.6K JA 1/10W (VCR 3785NE/SE,3785UK)
R6729		MT-GLAZE 6.8K JA 1/10W (VCR 3785NE/SE,3785UK)
(JUMPERS)		
J6715		MT-GLAZE 0.000 ZA 1/10W (VCR 3785NE/SE,3785UK)
J6716		MT-GLAZE 0.000 ZA 1/10W (VCR 3785NE/SE,3785UK)
J6731		MT-GLAZE 0.000 ZA 1/10W (VCR 3785UK ONLY)
J6732		MT-GLAZE 0.000 ZA 1/10W (VCR 3785UK ONLY)
J6733		MT-GLAZE 0.000 ZA 1/10W (VCR 3785UK ONLY)
J6741		MT-GLAZE 0.000 ZA 1/10W (VCR 3785NE/SE ONLY)
J6742		MT-GLAZE 0.000 ZA 1/10W (VCR 3785NE/SE ONLY)
J6743		MT-GLAZE 0.000 ZA 1/10W (VCR 3785NE/SE ONLY)
J6752		MT-GLAZE 0.000 ZA 1/10W (VCR 3785NE/SE,3785UK)
J6754		MT-GLAZE 0.000 ZA 1/10W (VCR 3785NE/SE,3785UK)

LOCATION	PARTS NO.	DESCRIPTION

COMPL PWB,AD-1

COMPLNO.6913 4653 (VCR 3785NE/SE,3785UK)
COMPLNO.6913 4666 (VCR 3785CE,3785NL)

(SEMICONDUCTORS)		
Q2001		TR 2SC3331-T
OR	3614 4650	TR 2SC3331-U
Q2002		TR DTA124EK
OR	3614 4432	TR 2SA1342
Q2003	3614 4469	TR DTC144EK
OR	3614 4359	TR 2SC3395
Q2004	3614 4469	TR DTC144EK
OR	3614 4359	TR 2SC3395
Q2008	3614 4469	TR DTC144EK
OR	3614 4359	TR 2SC3395
Q2011	3614 4466	TR 2SC2412K-R
OR	3614 5272	TR 2SC2412K-S
OR	3614 4383	TR 2SC2812-L5
OR	3614 4635	TR 2SC2812-L6
Q2306	3614 5513	TR 2SC2274-E
OR	3614 5513	TR 2SC2274-F
Q2314	3614 4402	TR DTA144EK
OR	3614 4498	TR 2SA1341
Q2501		TR DTA124EK
OR	3614 4432	TR 2SA1342
Q2502	3614 4469	TR DTC144EK
OR	3614 4359	TR 2SC3395
Q2503		TR 2SC3331-T
OR	3614 4650	TR 2SC3331-U
(INTEGRATED CIRCUITS)		
IC201	3771 6356	IC BA7755A
IC231	3771 6751	IC AN3961NFBP-A
(DIODES)		
D2001	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D2301	3656 3114	ZENER DIODE MTZ5.6C
D2501	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
(VARIABLE RESISTORS)		
VR201	3111 8726	SEMI VR 100KB
OR		VR,SEMI 100KB
VR233	3112 9638	VR,SEMI,10K S
VR234	3112 9639	VR,SEMI,5K S
(INDUCTORS)		
L2001	4543 3929	COIL,INDUCTOR 560UHJ
L2002	4543 3278	HF CHOKE 27MH
L2003	4543 3871	HF CHOKE 10000UHJ
L2501	4543 3929	COIL,INDUCTOR 560UHJ
(TRANSFORMERS)		
T2001	3614 7813	TRANS,OSC
T2501	4552 7545	TRANS,OSC

(CAPACITORS)				
C2001	ELECT	0.22U	M	50V
C2002	CERAMIC	0.01U	K	50V
C2003	ELECT	33U	M	6.3V
C2004	CERAMIC	1500P	K	50V
C2005	ELECT	1U	M	50V
C2006	CERAMIC	0.012U	K	16V
C2007	ELECT	10U	M	16V
C2009	CERAMIC	180P	J	50V
C2019	ELECT	47U	M	16V
C2021	CERAMIC	0.022U	K	50V
C2022	CERAMIC	4700P	K	50V
C2023	CERAMIC	220P	J	50V
C2024	POLYPRO	6800P	J	100V
C2025	CERAMIC	3300P	K	50V
C2027	CERAMIC	0.022U	K	16V
C2301	ELECT	10U	M	16V
C2302	ELECT	10U	M	16V
C2303	ELECT	10U	M	16V
C2304	ELECT	10U	M	16V
C2305	ELECT	10U	M	16V
C2306	ELECT	10U	M	16V

LOCATION	PARTS NO.	DESCRIPTION			
C2307		ELECT	10U	M	16V
C2308		ELECT	10U	M	16V
C2310		ELECT	33U	M	6.3V
C2311		ELECT	33U	M	6.3V
C2312		ELECT	33U	M	6.3V
C2313		CERAMIC	0.047U	K	50V
C2314		CERAMIC	0.047U	K	50V
C2315		ELECT	2.2U	M	50V
C2316		ELECT	2.2U	M	50V
C2317		ELECT	100U	M	6.3V
C2318		ELECT	100U	M	6.3V
C2319		CERAMIC	0.015U	K	50V
C2320		CERAMIC	0.015U	K	50V
C2321		CERAMIC	0.01U	K	50V
C2322		CERAMIC	0.01U	K	50V
C2323		CERAMIC	0.01U	K	50V
C2324		CERAMIC	0.01U	K	50V
C2325		CERAMIC	0.01U	K	50V
C2326		CERAMIC	0.01U	K	50V
C2327		ELECT	47U	M	6.3V
C2329		CERAMIC	0.01U	K	50V
C2330		CERAMIC	0.01U	K	50V
C2331		ELECT	10U	M	16V
C2332		ELECT	10U	M	16V
C2333		ELECT	10U	M	16V
C2334		ELECT	47U	M	16V
C2343		ELECT	10U	M	16V
		(VCR 3785NE/SE,3785UK)			
C2344		MT-POLYEST	0.22U	J	50V
C2345		CERAMIC	270P	J	50V
C2350		CERAMIC	0.01U	K	50V
C2352		ELECT	10U	M	16V
C2353		ELECT	22U	M	16V
C2354		ELECT	1U	M	50V
C2361		ELECT	47U	M	6.3V
C2362		CERAMIC	0.01U	K	50V
C2371		CERAMIC	0.01U	K	50V
C2372		CERAMIC	0.01U	K	50V
C2501		POLYPRO	0.047U	J	100V
C2502		ELECT	47U	M	16V
C2503		CERAMIC	0.01U	K	50V
C2504		CERAMIC	0.01U	K	50V
(RESISTORS)					
R2001		MT-GLAZE	2.7K	JA	1/10W
R2002		MT-GLAZE	10K	JA	1/10W
R2003		MT-GLAZE	270K	JA	1/10W
R2004		MT-GLAZE	240	JA	1/10W
R2005		MT-GLAZE	20K	JA	1/10W
R2006		MT-GLAZE	2.2K	JA	1/10W
R2007		MT-GLAZE	16K	JA	1/10W
R2008		MT-GLAZE	15K	JA	1/10W
R2010		MT-GLAZE	3.3K	JA	1/10W
R2013		CARBON	33	JA	1/4W
R2015		MT-GLAZE	4.7	JA	1/10W
R2035		MT-GLAZE	22K	JA	1/10W
R2036		MT-GLAZE	47	JA	1/10W
R2037		MT-GLAZE	22K	JA	1/10W
R2038		MT-GLAZE	100	JA	1/10W
R2039		MT-GLAZE	10K	JA	1/10W
R2051		MT-GLAZE	3.9K	JA	1/10W
R2052		MT-GLAZE	1K	JA	1/10W
R2054		MT-GLAZE	33K	JA	1/10W
R2055		MT-GLAZE	15K	JA	1/10W
R2301		MT-GLAZE	39K	JA	1/10W
R2302		MT-GLAZE	39K	JA	1/10W
R2303		MT-GLAZE	18K	JA	1/10W
R2304		MT-GLAZE	18K	JA	1/10W
R2305		MT-GLAZE	39K	JA	1/10W
R2306		MT-GLAZE	39K	JA	1/10W
R2307		MT-GLAZE	18K	JA	1/10W
R2308		MT-GLAZE	18K	JA	1/10W
R2309		MT-GLAZE	33K	JA	1/10W
R2310		MT-GLAZE	33K	JA	1/10W
R2311		MT-GLAZE	30K	JA	1/10W
R2312		MT-GLAZE	30K	JA	1/10W
R2313		MT-GLAZE	510	JA	1/10W
R2314		MT-GLAZE	510	JA	1/10W

PB100711

LOCATION	PARTS NO.	DESCRIPTION			
R2315		MT-GLAZE	4.7K	JA	1/10W
R2316		MT-GLAZE	4.7K	JA	1/10W
R2317		MT-GLAZE	12K	JA	1/10W
R2318		MT-GLAZE	12K	JA	1/10W
R2319		MT-GLAZE	3.9K	JA	1/10W
R2320		MT-GLAZE	3.9K	JA	1/10W
R2321		MT-FILM	15K	DU	1/10W
R2322		MT-FILM	12K	DU	1/10W
R2323		MT-GLAZE	2.7K	JA	1/10W
R2324		MT-GLAZE	1K	JA	1/10W
R2329		MT-GLAZE	220K	JA	1/10W
R2330		MT-GLAZE	220K	JA	1/10W
R2337		MT-GLAZE	560K	JA	1/10W
R2338		MT-GLAZE	3.3M	JA	1/10W
R2339		MT-GLAZE	1K	JA	1/10W
R2340		MT-GLAZE	12K	JA	1/10W
R2343		MT-GLAZE	100K	JA	1/10W
R2347		MT-GLAZE	4.7K	JA	1/10W
R2348		MT-GLAZE	4.7K	JA	1/10W
R2349		MT-GLAZE	4.7K	JA	1/10W
R2350		MT-GLAZE	510K	JA	1/10W
R2351		MT-GLAZE	39K	JA	1/10W
R2352		MT-GLAZE	39K	JA	1/10W
R2353		MT-GLAZE	18K	JA	1/10W
R2354		MT-GLAZE	18K	JA	1/10W
R2355		MT-GLAZE	33K	JA	1/10W
		(VCR 3785NE/SE,3785UK)			
R2356		MT-GLAZE	30K	JA	1/10W
		(VCR 3785NE/SE,3785UK)			
R2360		MT-GLAZE	22K	JA	1/10W
R2361		MT-GLAZE	10K	JA	1/10W
R2368		MT-GLAZE	1K	JA	1/10W
R2371		MT-GLAZE	1.8K	JA	1/10W
R2380		MT-GLAZE	220K	JA	1/10W
R2501		CARBON	33	JA	1/4W
R2502		MT-GLAZE	47	JA	1/10W
R2503		MT-GLAZE	15K	JA	1/10W
R2504		MT-GLAZE	10	JA	1/10W
R2505		MT-GLAZE	22K	JA	1/10W
(JUMPERS)					
J2101		MT-GLAZE	0.000	ZA	1/10W
J2102		MT-GLAZE	0.000	ZA	1/10W
J2103		MT-GLAZE	0.000	ZA	1/10W
J2104		MT-GLAZE	0.000	ZA	1/10W
J2301		MT-GLAZE	0.000	ZA	1/10W
J2302		MT-GLAZE	0.000	ZA	1/10W
J2309		MT-GLAZE	0.000	ZA	1/10W
J2313		MT-GLAZE	0.000	ZA	1/10W
J2314		MT-GLAZE	0.000	ZA	1/10W

COMPL,MC-1

COMPL.NO. 6913 1133

(DIODE)		
D8001	3683 1088	PHOTO COUPLE SPI-315-04-C
OR	3683 1102	PHOTO DIODE ON2170-R
(RESISTOR)		
R8001		CARBON 270 JA 1/4W
OR		CARBON 270 JA 1/6W
R8002		CARBON 100 JA 1/4W
OR		CARBON 100 JA 1/6W
(SWITCH)		
S8001	4112 9704	SPECIAL SWITCH

FLEXIBLE FLAT CABLE

4131 4333	FLEXIBLE FLAT CABLES,CN303-CN811
4131 4334	FLEXIBLE FLAT CABLES,CN301-CN701
4131 4337	FLEXIBLE FLAT CABLES,CN101-CN181

VCR 3785 NE/SE
VCR 3785 CE
VCR 3785 UK
VCR 3785 NL

BLOCK DIAGRAMS,CIRCUIT DIAGRAMS & PRINTED WIRING BOARDS

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NOTES:

1. All resistance values in "OHMS" unless otherwise noted. (K=1,000 M=1,000,000)
2. All capacitance values in "µfd" unless otherwise noted. p=pico farad
3. All inductance values in "mH"unless otherwise noted. µ=micro henry.

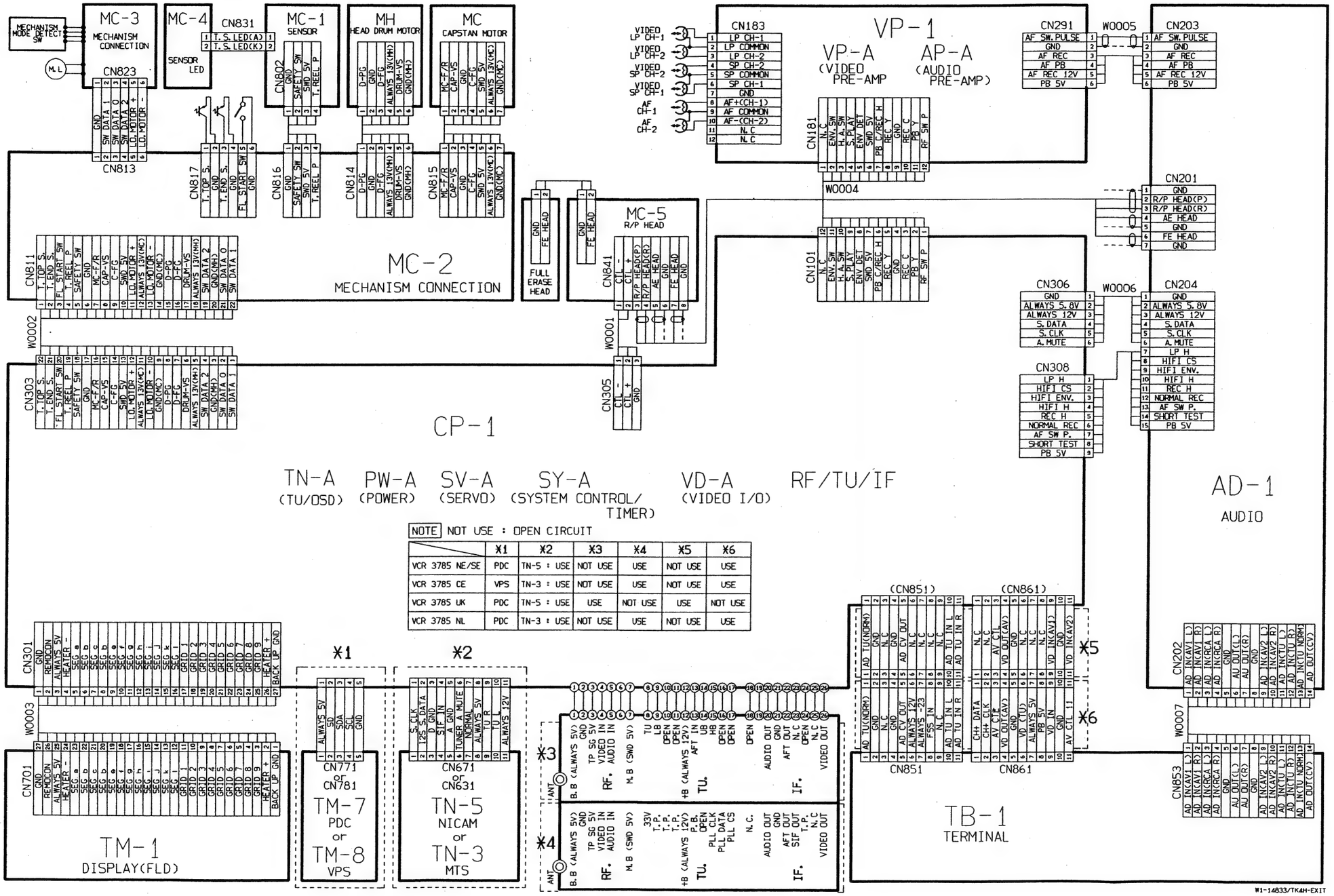
PRODUCT SAFETY NOTICE

THE COMPONENTS DESIGNATED BY A SYMBOL (⚠) IN THIS SCHEMATIC DIAGRAM DESIGNATES COMPONENTS WHOSE VALUE ARE OF SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. SHOULD ANY COMPONENT DESIGNATED BY A SYMBOL NEED TO BE REPLACED, USE ONLY THE PART DESIGNATED IN THE PARTS LIST. DO NOT DEVIATE FROM THE RESISTANCE, WATTAGE AND VOLTAGE RATINGS SHOWN.

PAL_A

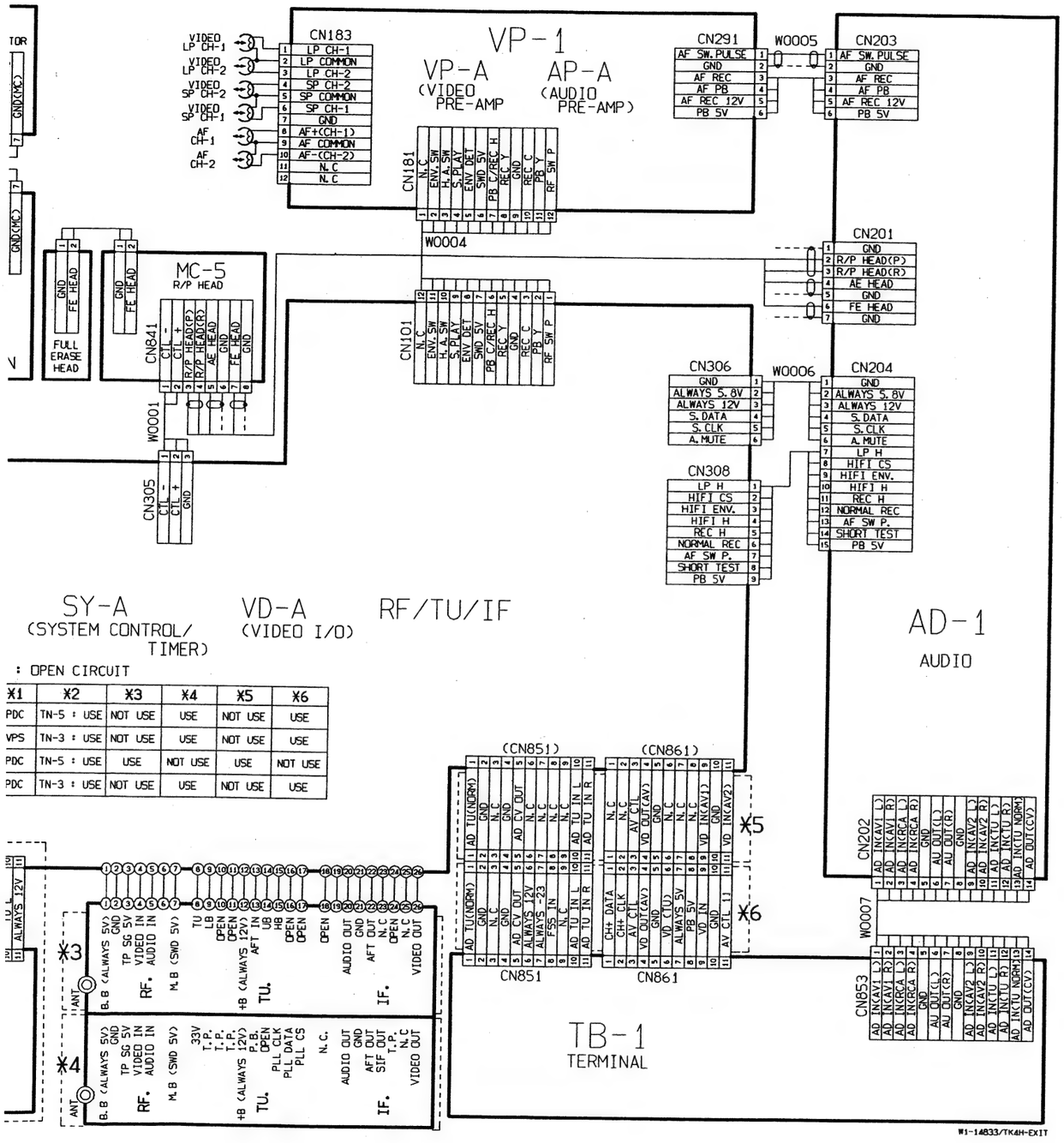
1. OVERALL WIRING, MECHANISM CONNECTION, & BLOCK DIAGRAMS

1-1. OVERALL WIRING



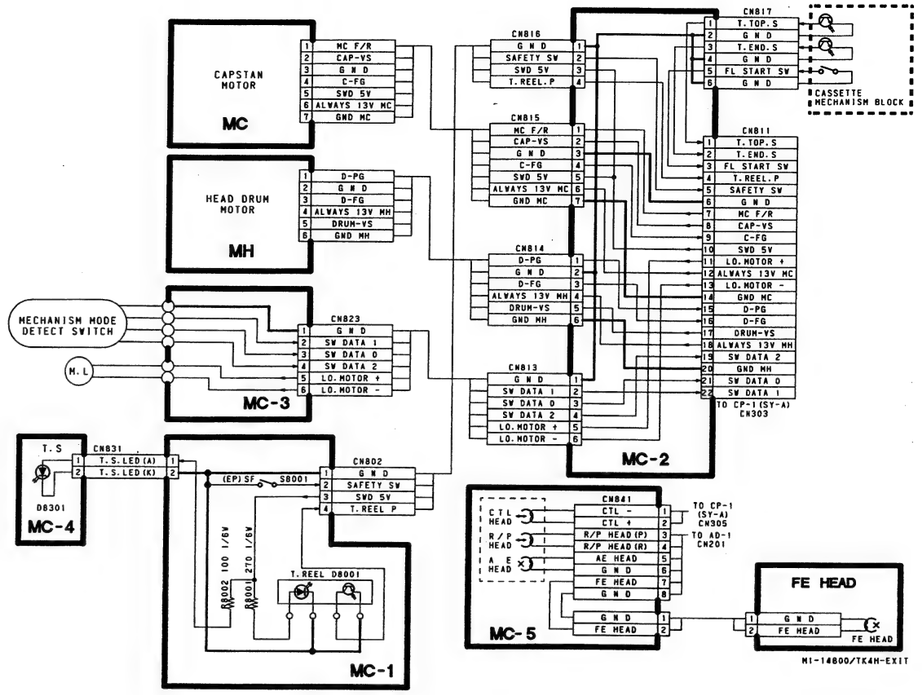
	✕1	✕2	✕3	✕4	✕5	✕6
VCR 3785 NE/SE	PDC	TN-5 : USE	NOT USE	USE	NOT USE	USE
VCR 3785 CE	VPS	TN-3 : USE	NOT USE	USE	NOT USE	USE
VCR 3785 UK	PDC	TN-5 : USE	USE	NOT USE	USE	NOT USE
VCR 3785 NL	PDC	TN-3 : USE	NOT USE	USE	NOT USE	USE

1-1. OVERALL WIRING

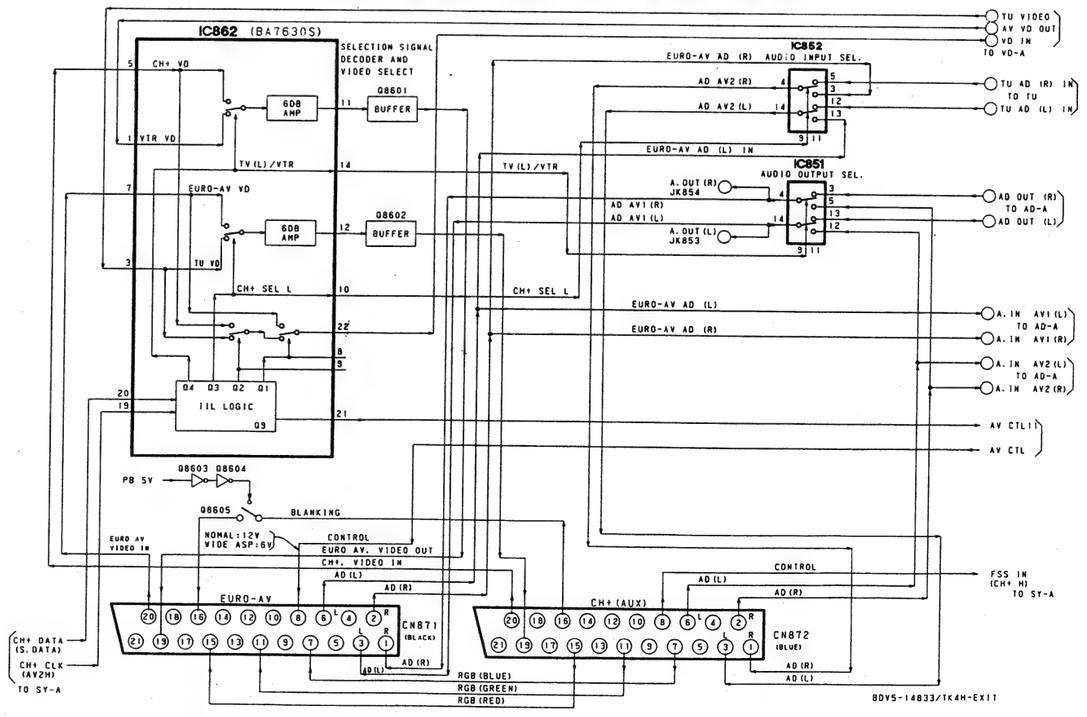


¥1	¥2	¥3	¥4	¥5	¥6
PDC	TN-5 : USE	NOT USE	USE	NOT USE	USE
VPS	TN-3 : USE	NOT USE	USE	NOT USE	USE
PDC	TN-5 : USE	USE	NOT USE	USE	NOT USE
PDC	TN-3 : USE	NOT USE	USE	NOT USE	USE

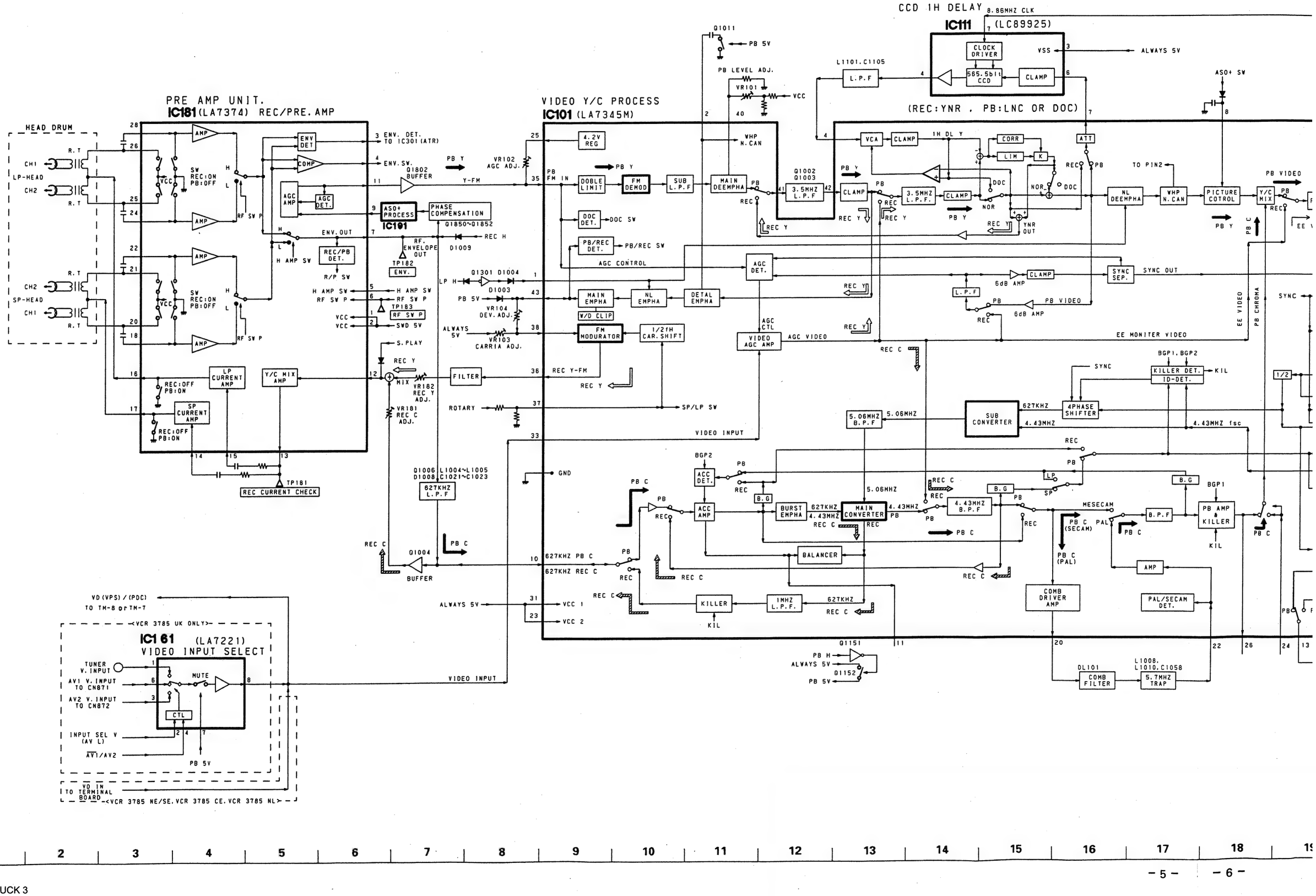
1-2. MECHANISM CONNECTION



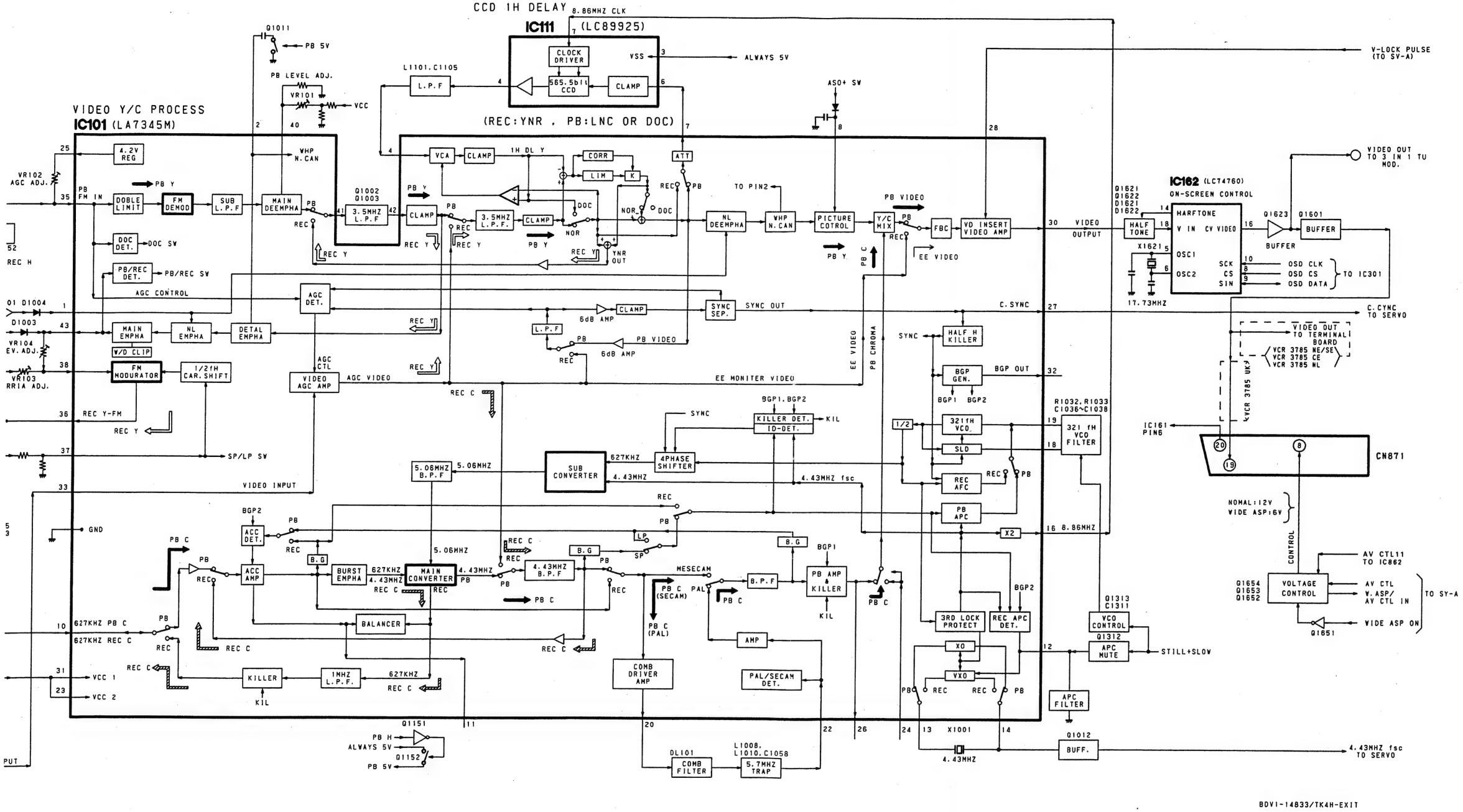
1-3. TERMINAL & INPUT/OUTPUT SELECTOR CIRCUIT (VCR 3785 NE/SE, VCR 3785 CE, & VCR 3785 NL)



1-4. VIDEO CIRCUIT



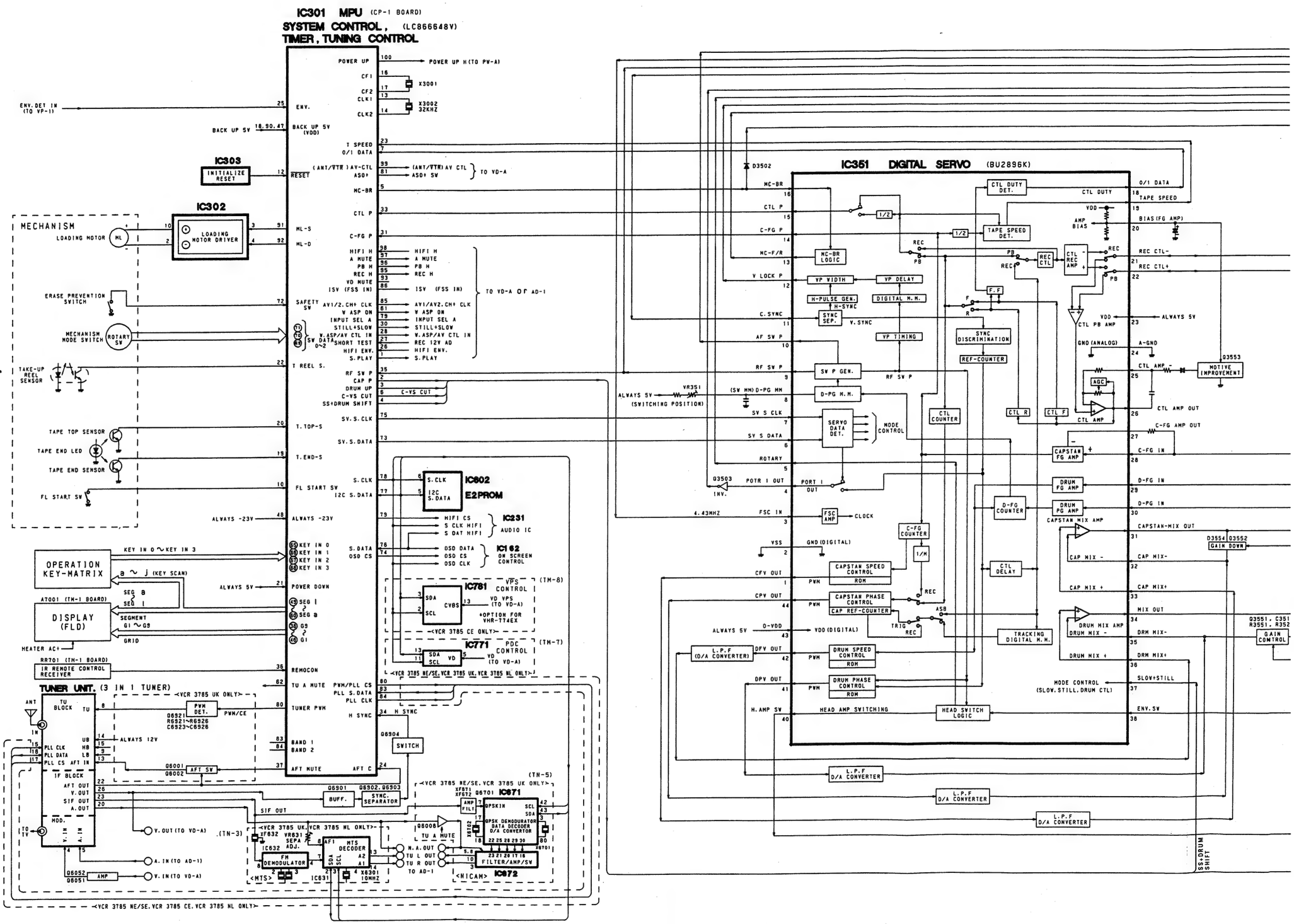
1-4. VIDEO CIRCUIT



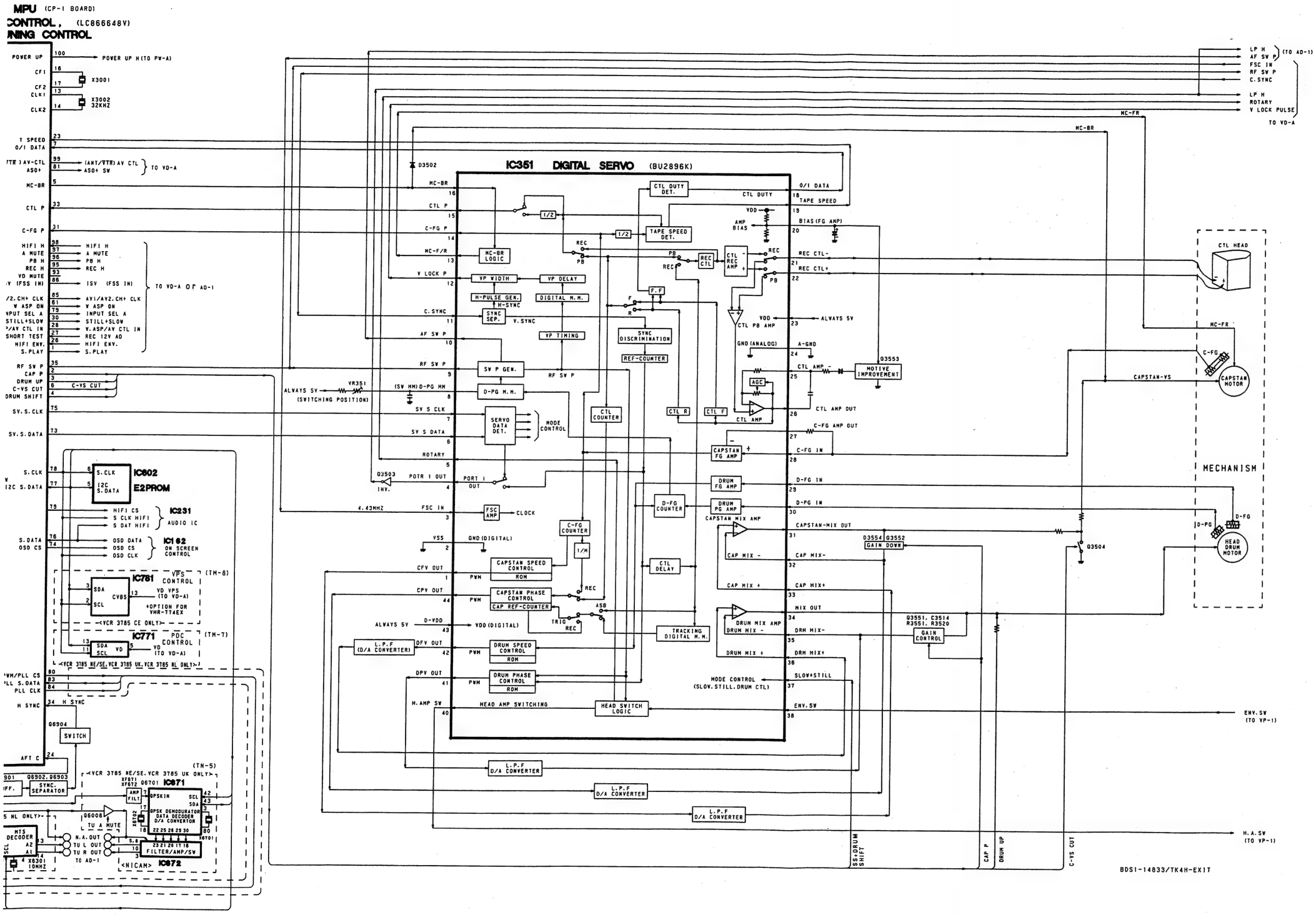
BDV1-14833/TK4H-EXIT

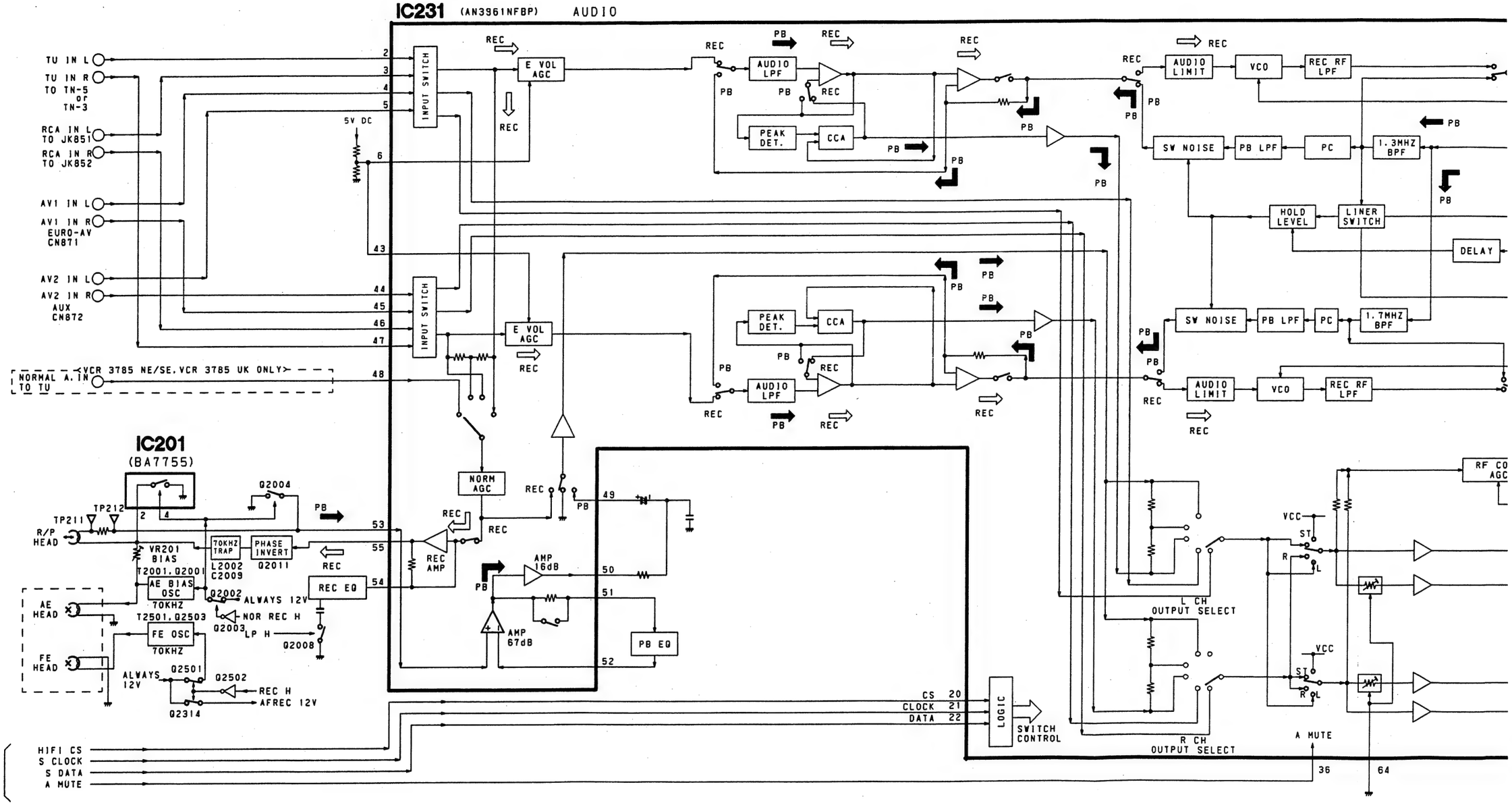
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

1-5. SYSTEM CONTROL & SERVO CIRCUIT

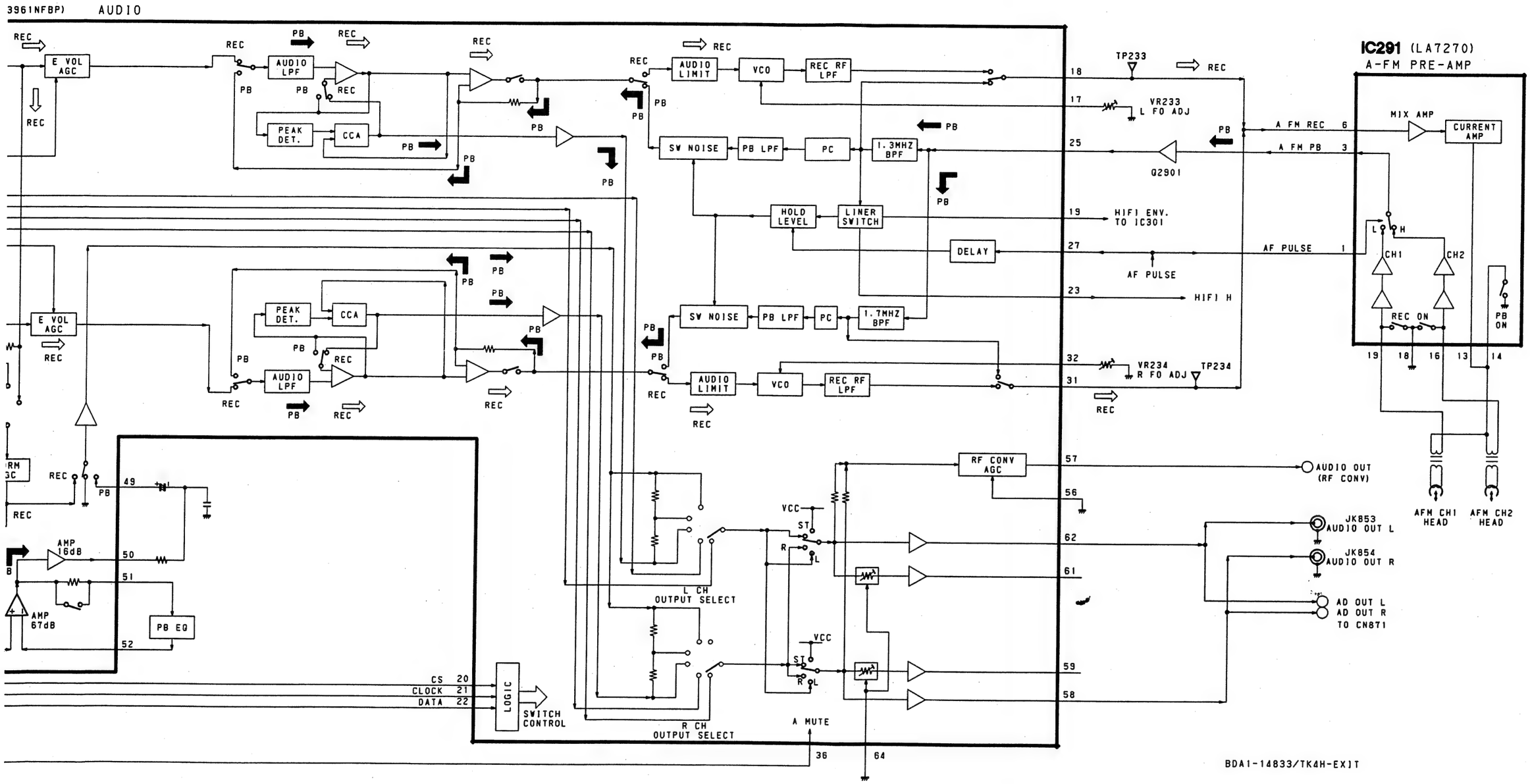


1-5. SYSTEM CONTROL & SERVO CIRCUIT




IC231 (AN3961NFBP) AUDIO
TU IN L
TU IN R
TO TN-5 or TN-3
RCA IN L TO JK851
RCA IN R TO JK852
AV1 IN L
AV1 IN R
EURO-AV CN871
AV2 IN L
AV2 IN R
AUX CN872
<VCR 3785 NE/SE, VCR 3785 UK ONLY>
NORMAL A.IN TO TU
5V DC
INPUT SWITCH
E VOL AGC
REC
PB
AUDIO LPF
PEAK DET.
CCA
NORM AGC
REC AMP
AMP 16dB
AMP 67dB
PB EQ
AUDIO LIMIT
VCO
REC RF LPF
SW NOISE
PB LPF
PC
1.3MHZ BPF
1.7MHZ BPF
HOLD LEVEL
LINER SWITCH
DELAY
L CH OUTPUT SELECT
R CH OUTPUT SELECT
VCC
ST
R
L
A MUTE
RF CO AGC
IC201
(BA7755)
TP211
TP212
R/P HEAD
VR201 BIAS
T2001, Q2001
AE BIAS OSC
70KHZ
Q2002
ALWAYS 12V
NOR REC H
Q2003
LP H
Q2008
AE HEAD
FE OSC
FE HEAD
ALWAYS 12V
Q2501
Q2502
REC H
AFREC 12V
Q2314
Q2004
70KHZ TRAP
L2002 C2009
PHASE INVERT
Q2011
REC EQ
CS 20
CLOCK 21
DATA 22
LOGIC
SWITCH CONTROL
TO SYSCON /SERVO
HIFI CS
S CLOCK
S DATA
A MUTE
36
64

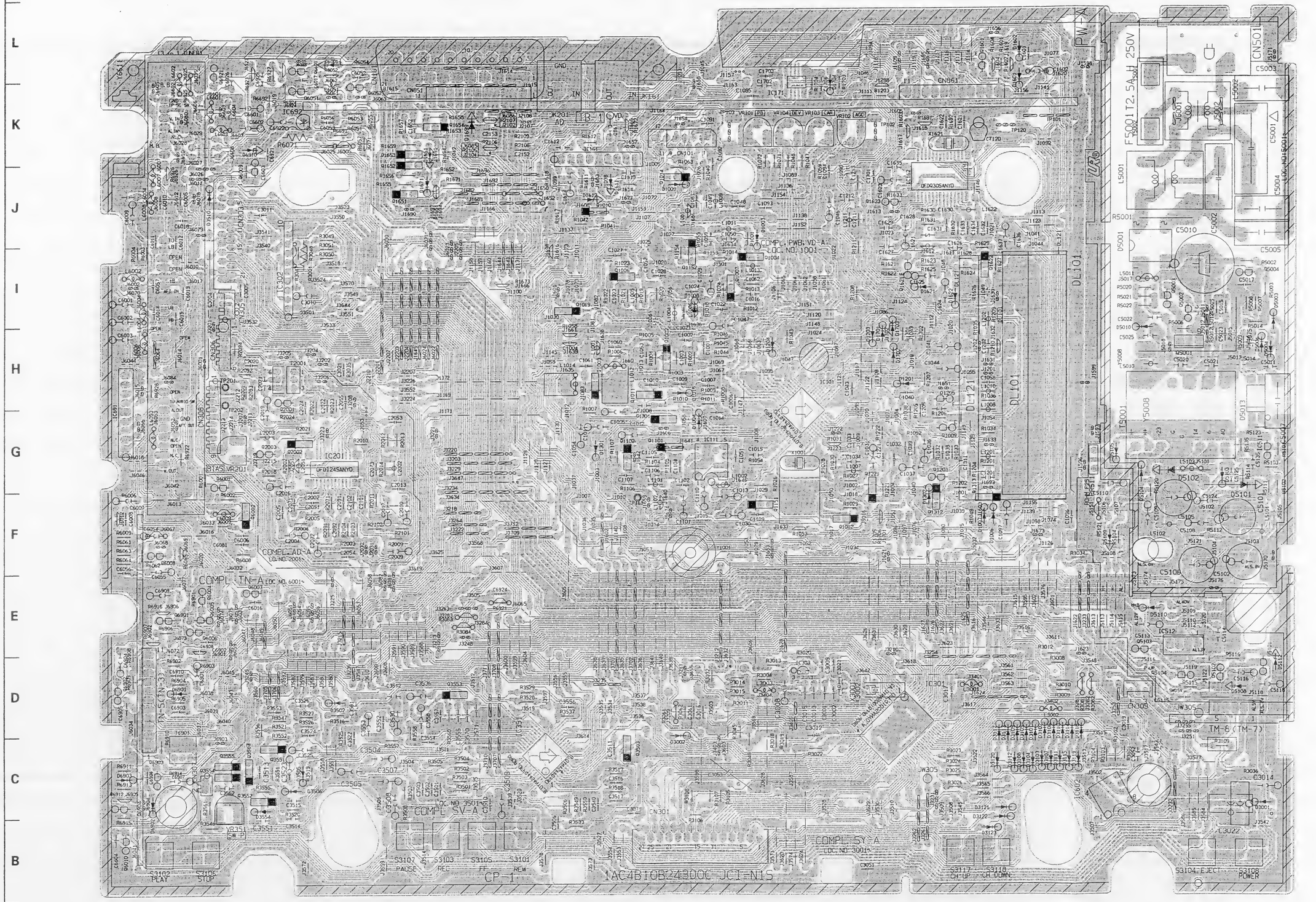
1-6. AUDIO CIRCUIT



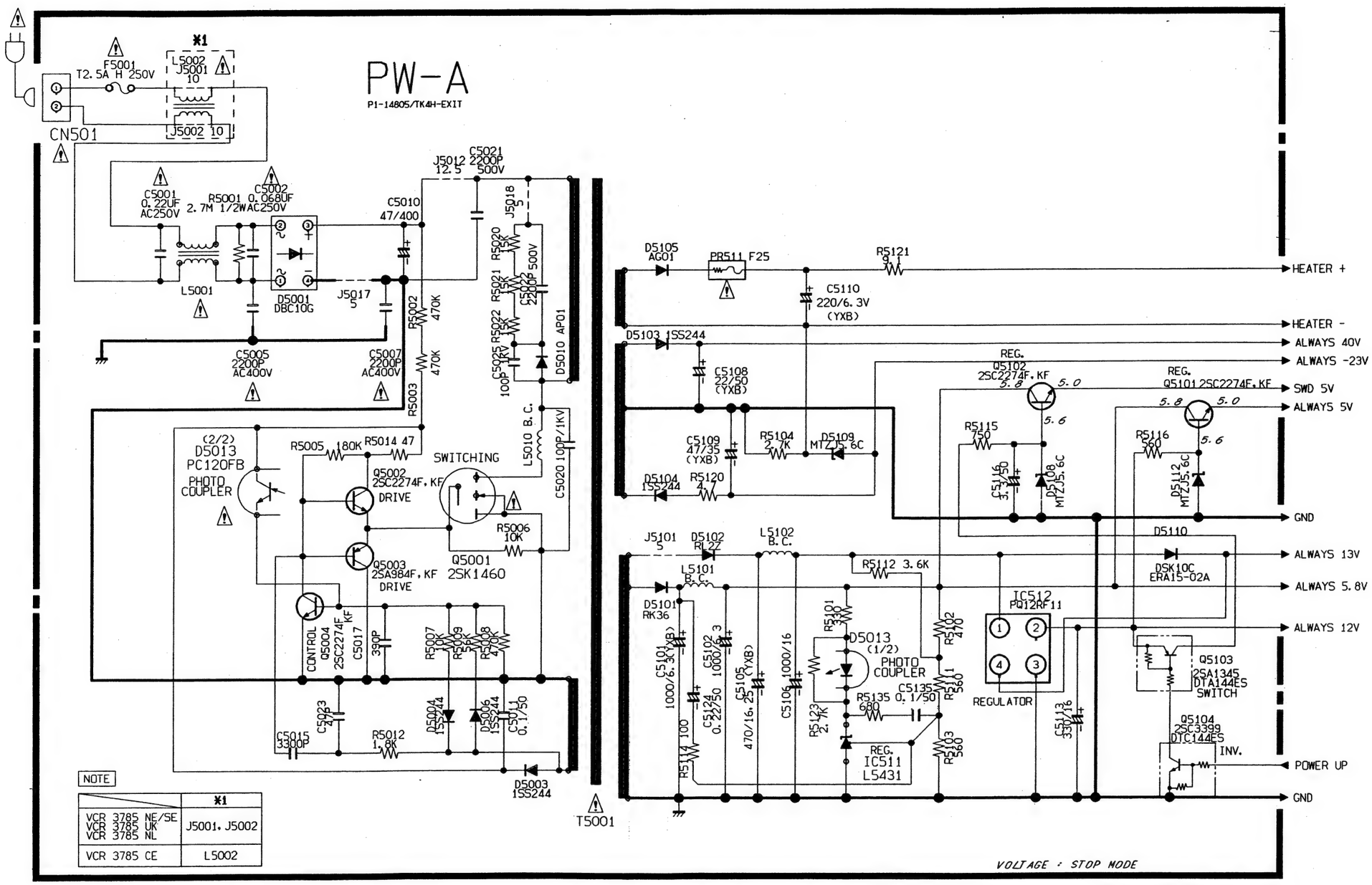
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

2. CIRCUIT DIAGRAMS & PRINTED WIRING BOARDS (P.W.B.)

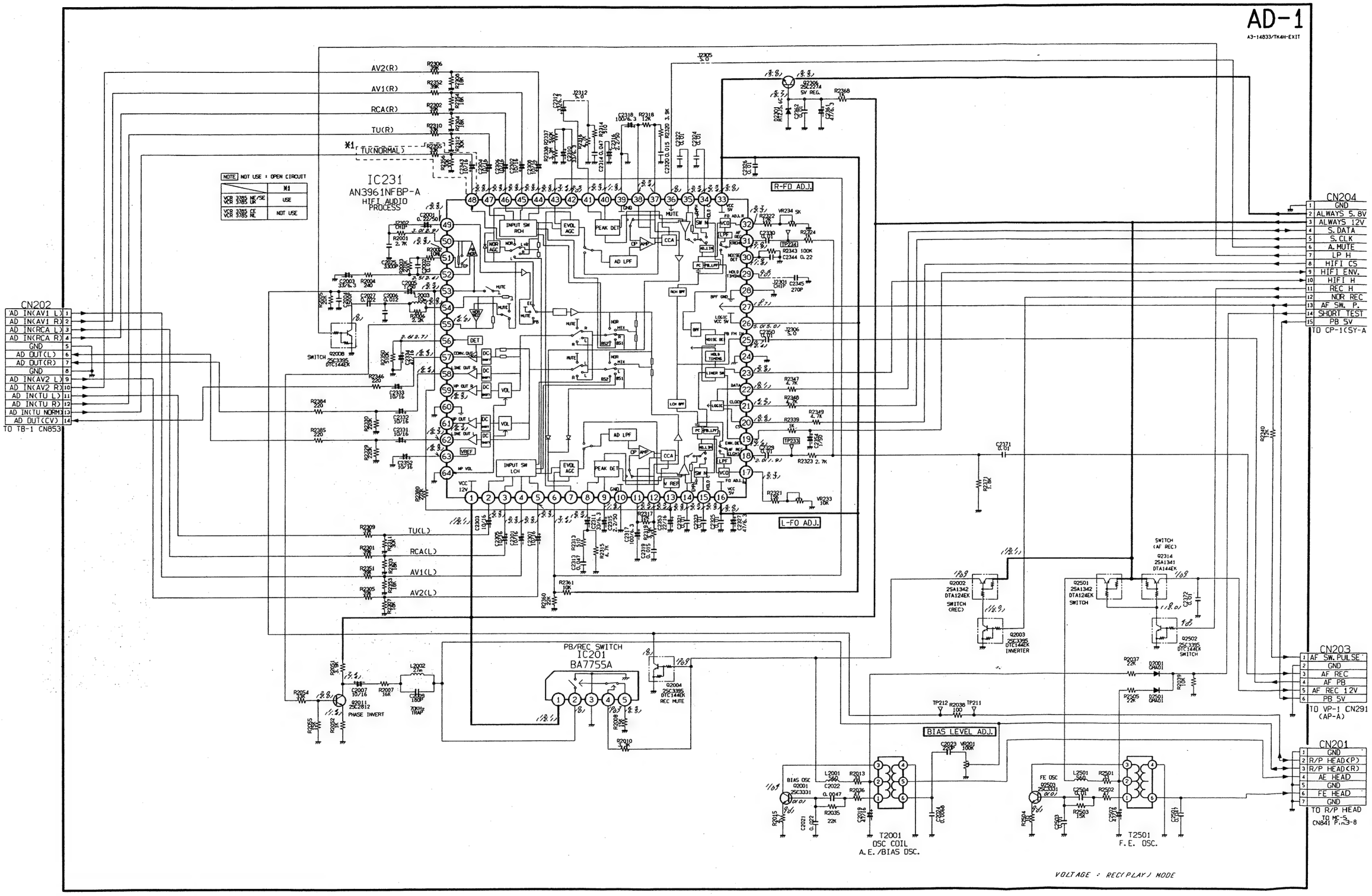
2-1. CP-1 P.W.B.



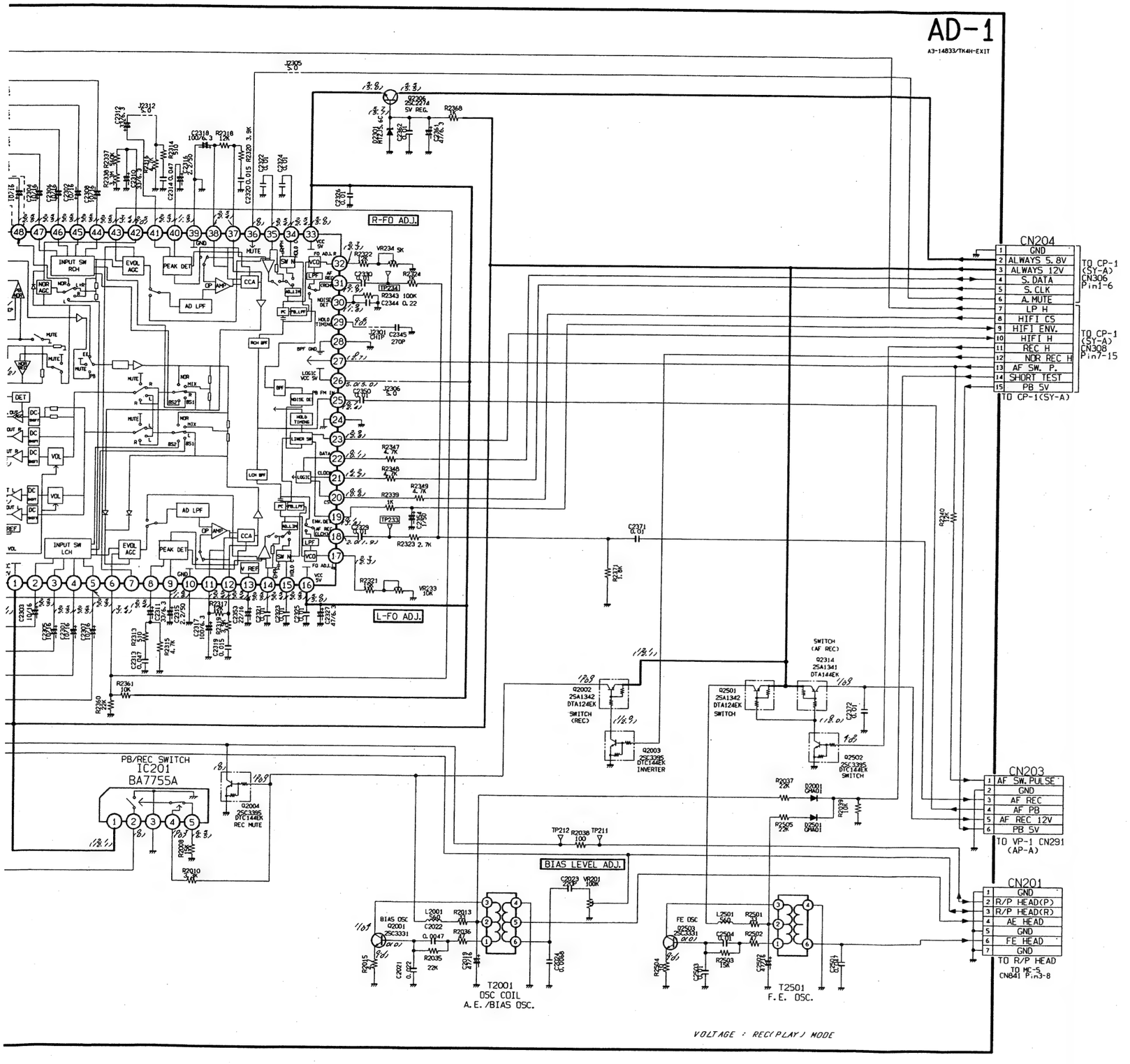
2-2. CP-1 BOARD (PW-A) POWER SUPPLY



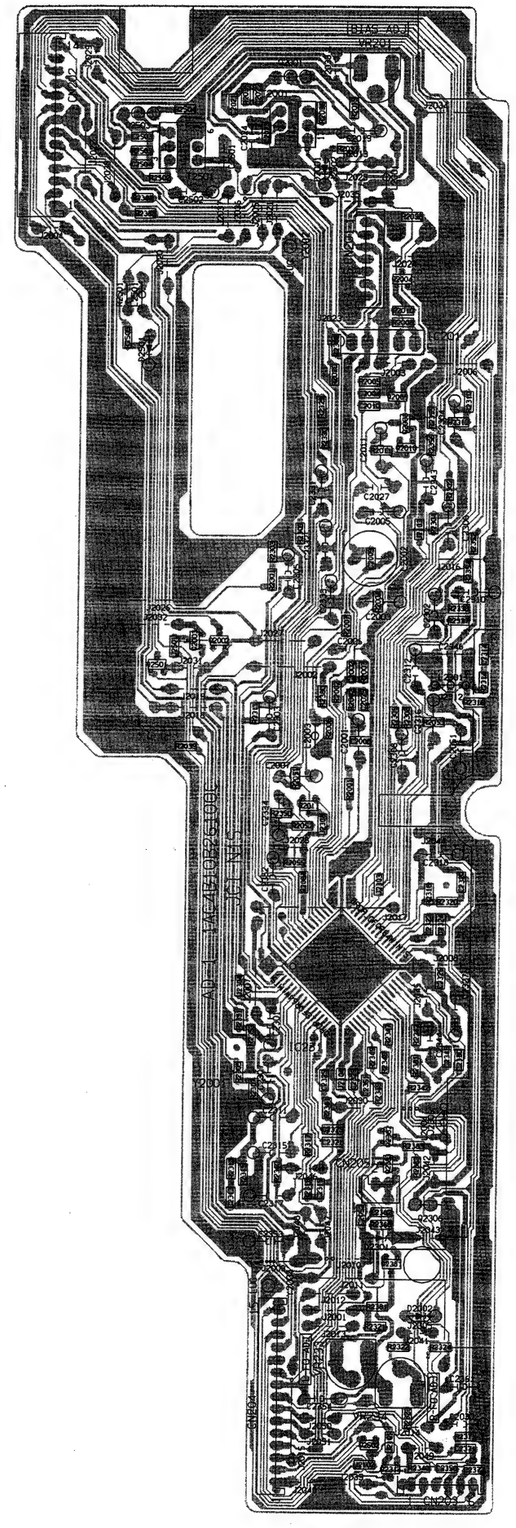
2-3. AD-1 BOARD AUDIO



2-3. AD-1 BOARD AUDIO

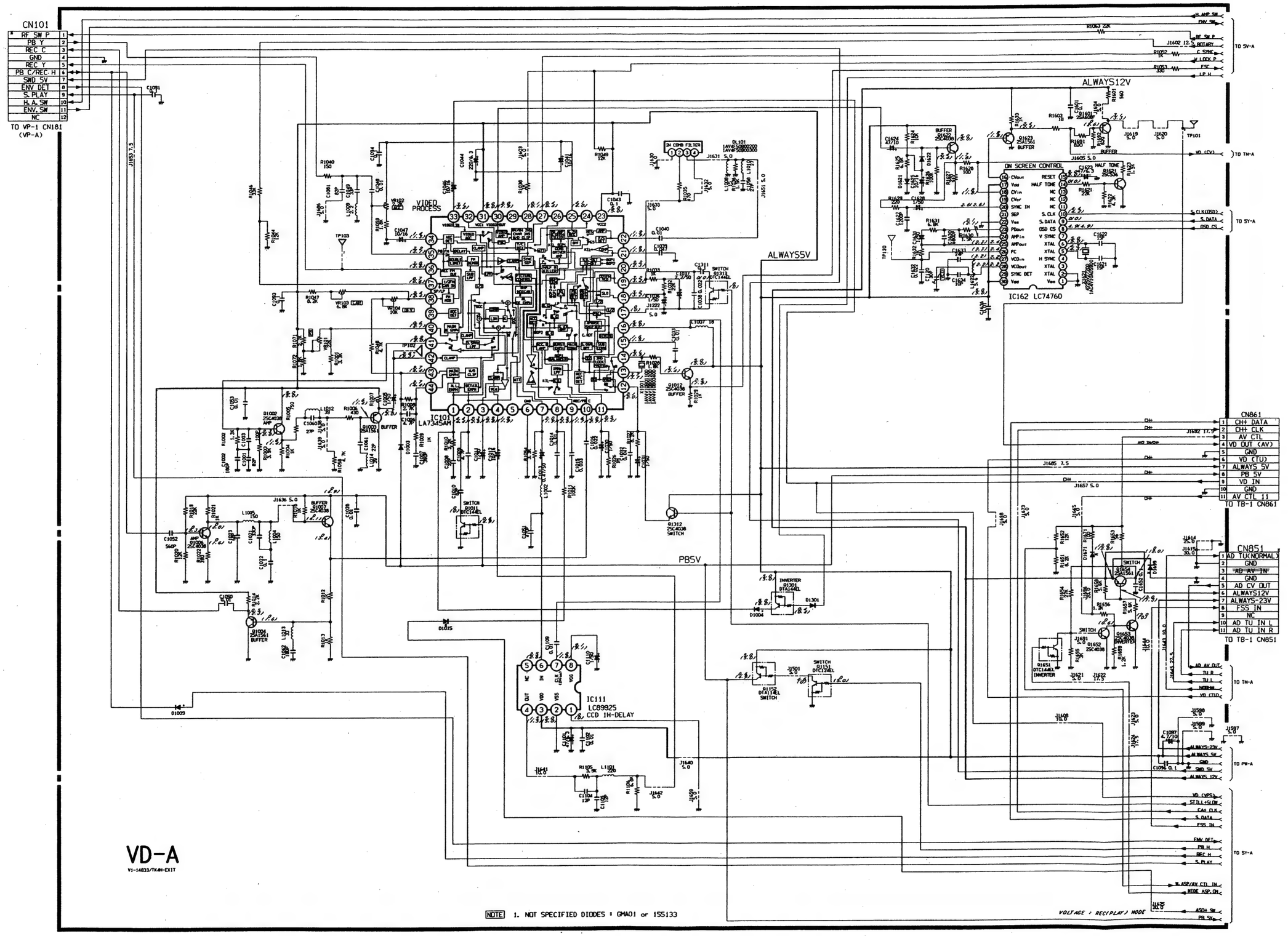


2-4. AD-1 P.W.B.



2-5. CP-1 BOARD (VD-A) VIDEO (VCR 3785 NE/SE, VCR 3785 CE, & VCR 3785 NL)

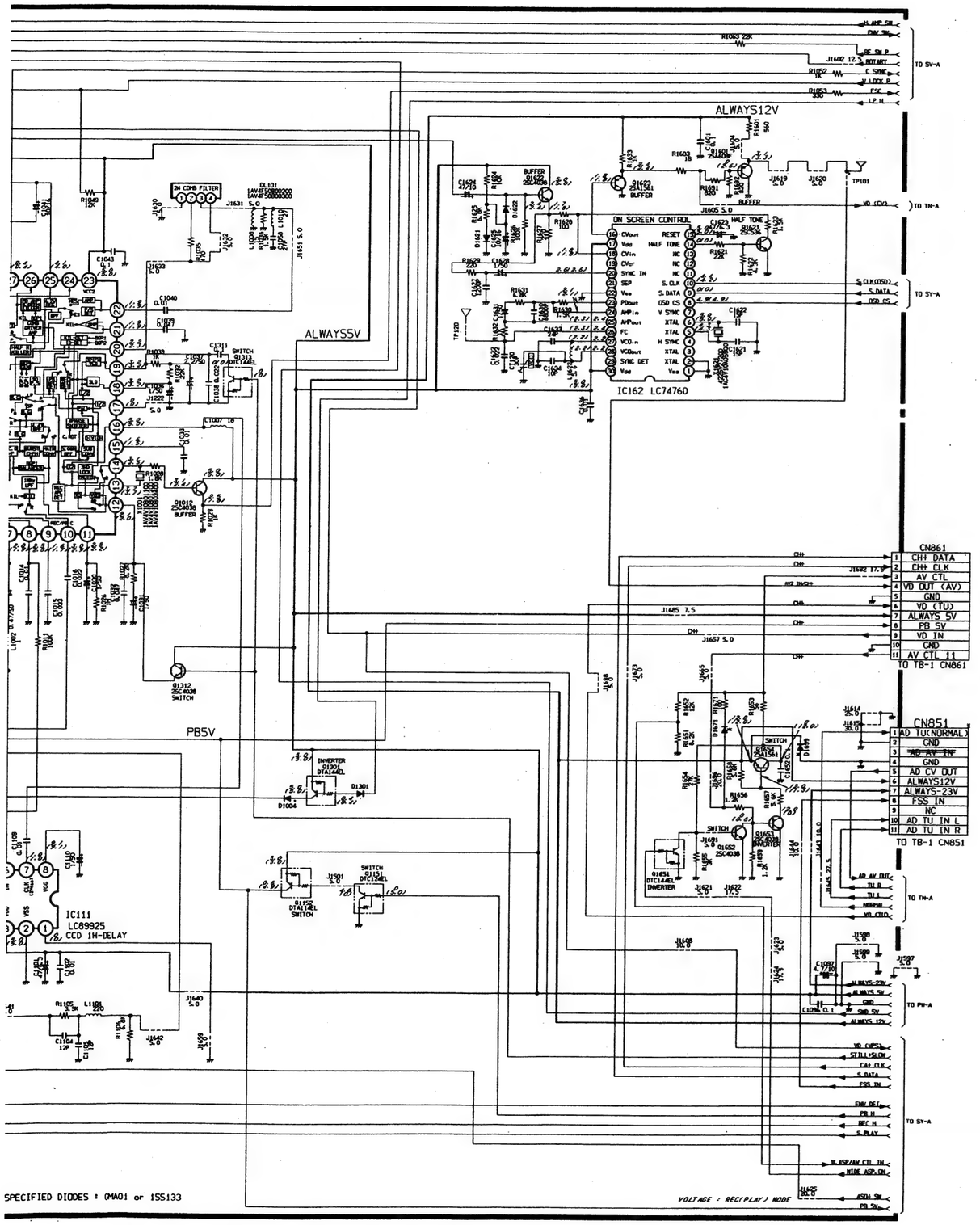
Note:The VD-A circuit diagrams for the model VCR 3785 UK is shown in page 43.



TEST LOCATIO
IC101 Pin 33 (VIDEO IN)
IC101 Pin 41
IC101 Pin 42
IC101 Pin 43
IC101 Pin 36 (REC FM OUT)
IC101 Pin 35 (PB FM IN)
IC101 Pin 41
IC101 Pin 42
IC101 Pin 7/4

VIDEO (VCR 3785 NE/SE, VCR 3785 CE, & VCR 3785 NL)

ıit diagrams for the model VCR 3785 UK is shown in page 43.



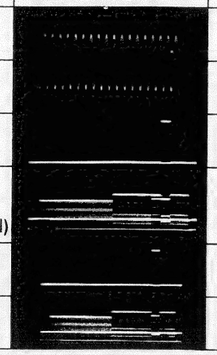
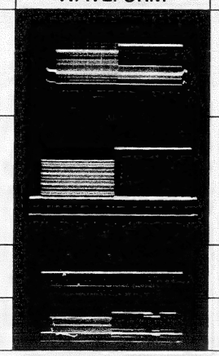
2-6. VIDEO CIRCUIT WAVEFORMS

WF-V-TP

TEST LOCATION	WAVEFORM	MODE/LEVEL	TEST LOCATION	WAVEFORM	MODE/LEVEL
IC101 Pin 33 (VIDEO IN)		REC, EE 1 Vp-p	IC101 Pin 30 (VIDEO OUT)		PB 2.5 Vp-p
IC101 Pin 41		REC, EE 0.6 Vp-p	IC101 Pin 30 (VIDEO OUT)		REC, EE 2 Vp-p
IC101 Pin 42		REC, EE 0.5 Vp-p	IC101 (UPPER) Pin 30 (LOWER) Pin 28		STILL (UPPER) 2 Vp-p (LOWER) 5 Vp-p
IC101 Pin 43		REC, EE 1.2 Vp-p	IC101 Pin 10 (REC CHROMA OUT)		REC, EE 0.4 Vp-p
IC101 Pin 36 (REC FM OUT)		REC, EE 1.0 Vp-p	Q1006 Base (PB CHROMA)		PB 0.3 Vp-p
IC101 Pin 35 (PB FM IN)		PB 0.3 Vp-p	Q1007 Emitter (PB CHROMA)		PB 0.2 Vp-p
IC101 Pin 41		PB 0.5 Vp-p	IC101 Pin 10 (PB CHROMA IN)		PB 0.2 Vp-p
IC101 Pin 42		PB 0.5 Vp-p	IC101 Pin 20		PB 1.0 Vp-p
IC101 Pin 7/4		PB 0.3 Vp-p	IC101 Pin 26		PB 0.6 Vp-p

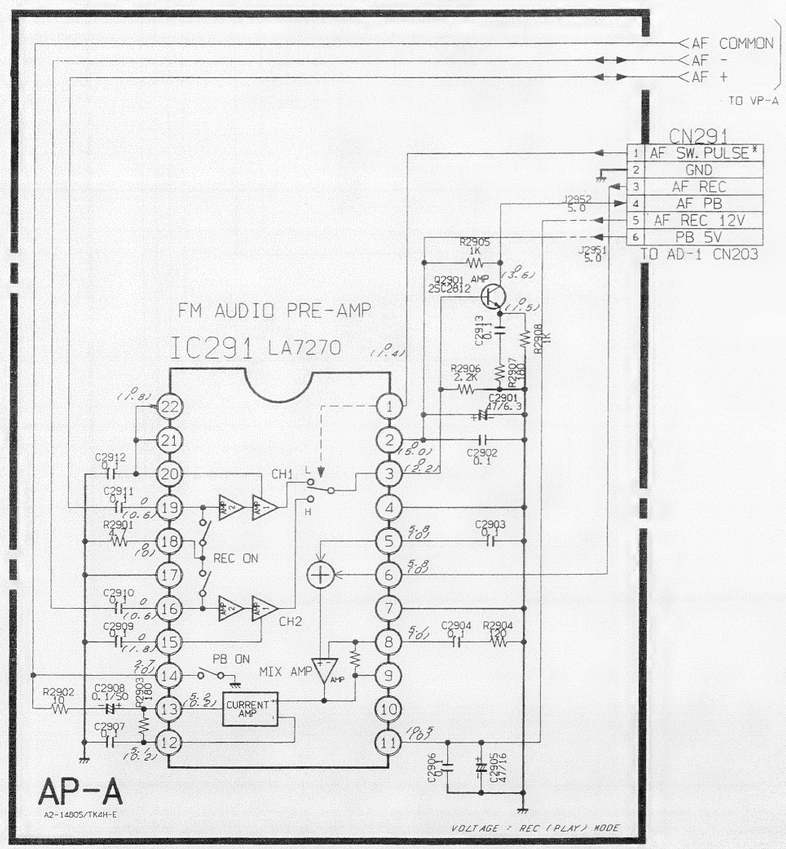
2-7. ON SCREEN (IC162) WAVEFORMS

(MODE: REC EE/ON SCREEN)

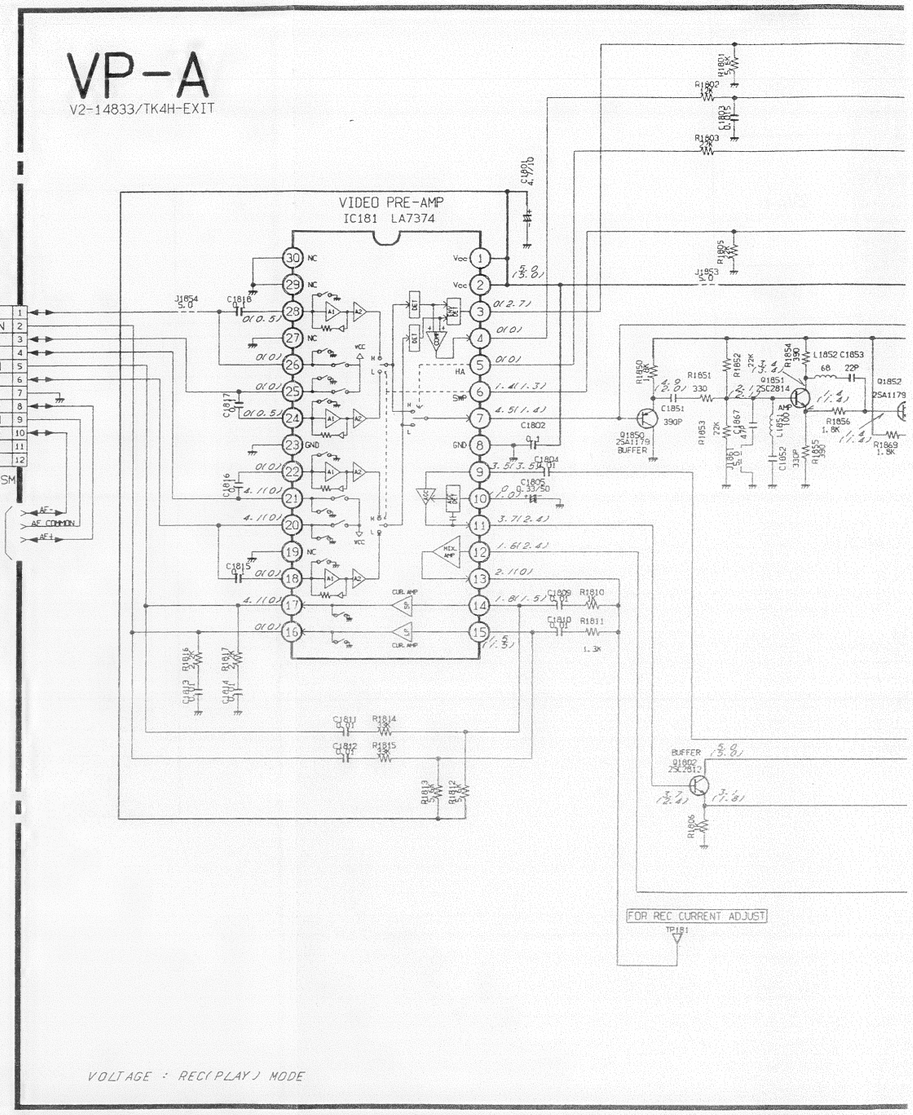
TEST LOCATION	WAVEFORM	LEVEL	TEST LOCATION	WAVEFORM	LEVEL
Pin 5 (17.7MHz X-TAL)		2Vp-p	Pin 19 (CV cr)		2Vp-p
Pin 6 (17.7MHz X-TAL)		3Vp-p			
Pin 14 (HALF TONE)		5Vp-p	Pin 20 (SYNC IN)		2Vp-p
Pin 16 (VIDEO OUT: WITH ON SCREEN)		2Vp-p			
Pin 14 (HALF TONE)		5Vp-p	Pin 23 (PD OUT)		4.5Vp-p
Pin 18 (VIDEO IN)		2Vp-p	Pin 16 (VIDEO OUT)		2Vp-p

WF-UFO-TP4

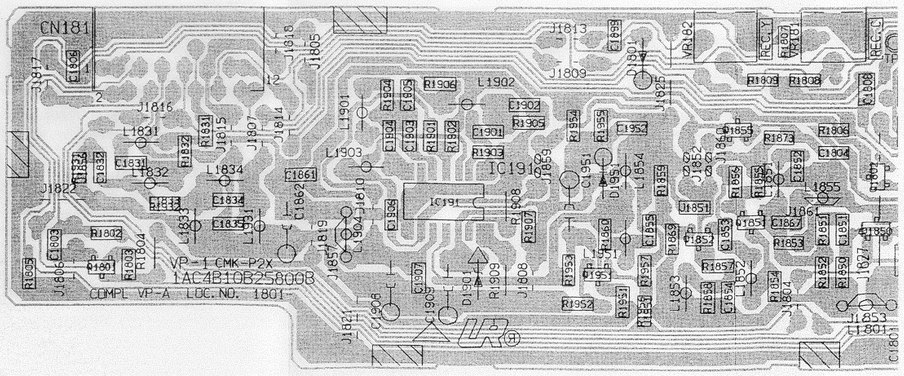
2-8. VP-1 BOARD (AP-A) AUDIO PRE-AMP



2-9. VP-1 BOARD (VP-A) VIDEO PR



2-10. VP-1 P.W.B.



:: REC EE/ON SCREEN)

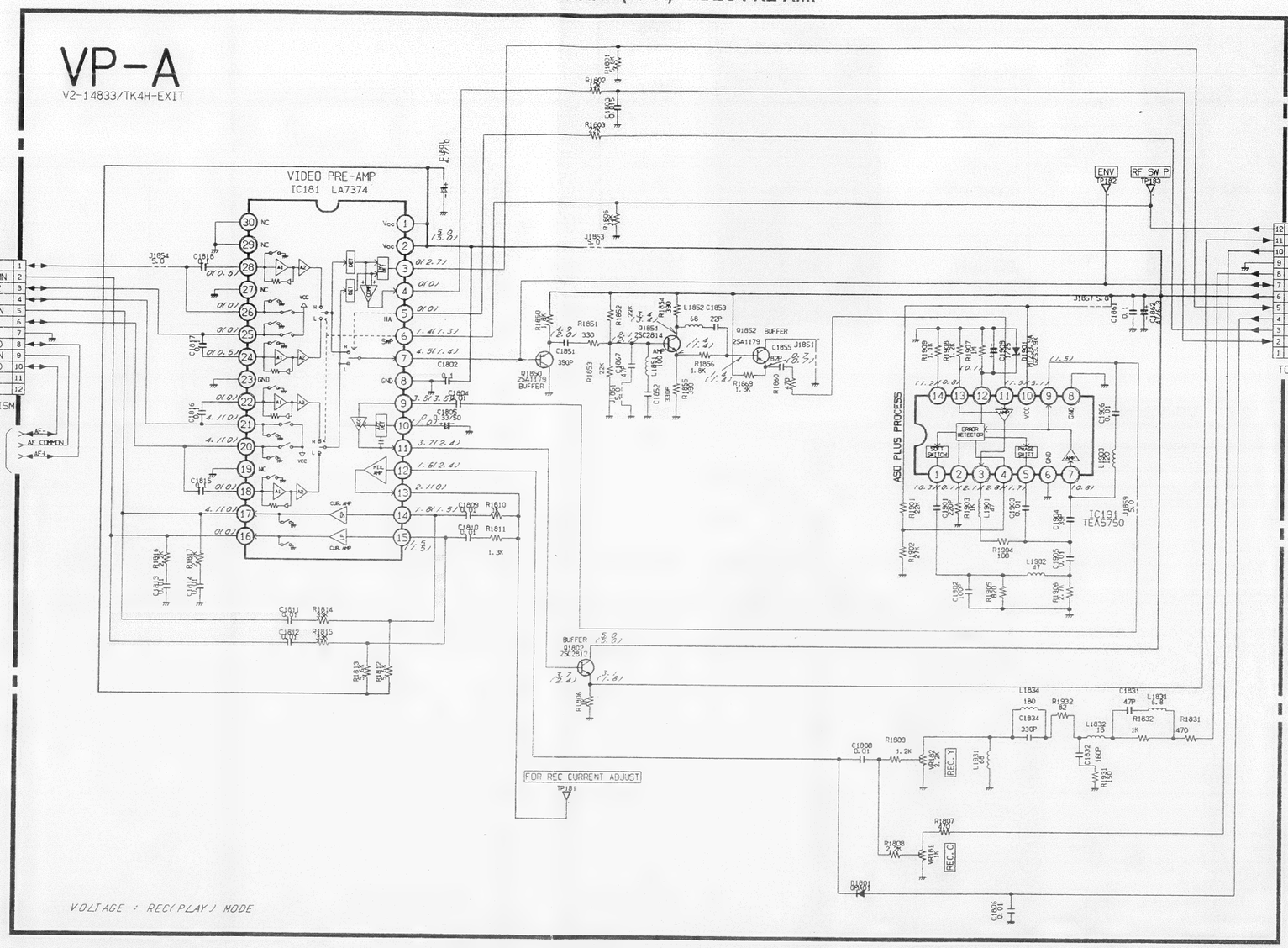
M	LEVEL
[redacted]	2Vp-p
[redacted]	2Vp-p
[redacted]	4.5Vp-p
[redacted]	2Vp-p

WF-UFO-TP4

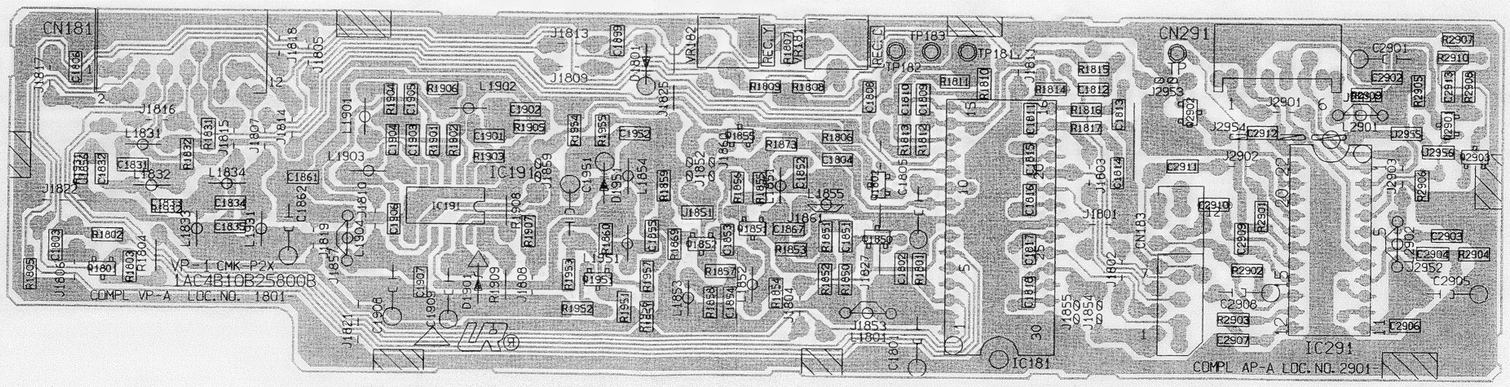
COMMON
−
+
TO VP-A

)1
ULSE*
C
B
12V
V
CN203

2-9. VP-1 BOARD (VP-A) VIDEO PRE-AMP



2-10. VP-1 P.W.B.



8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

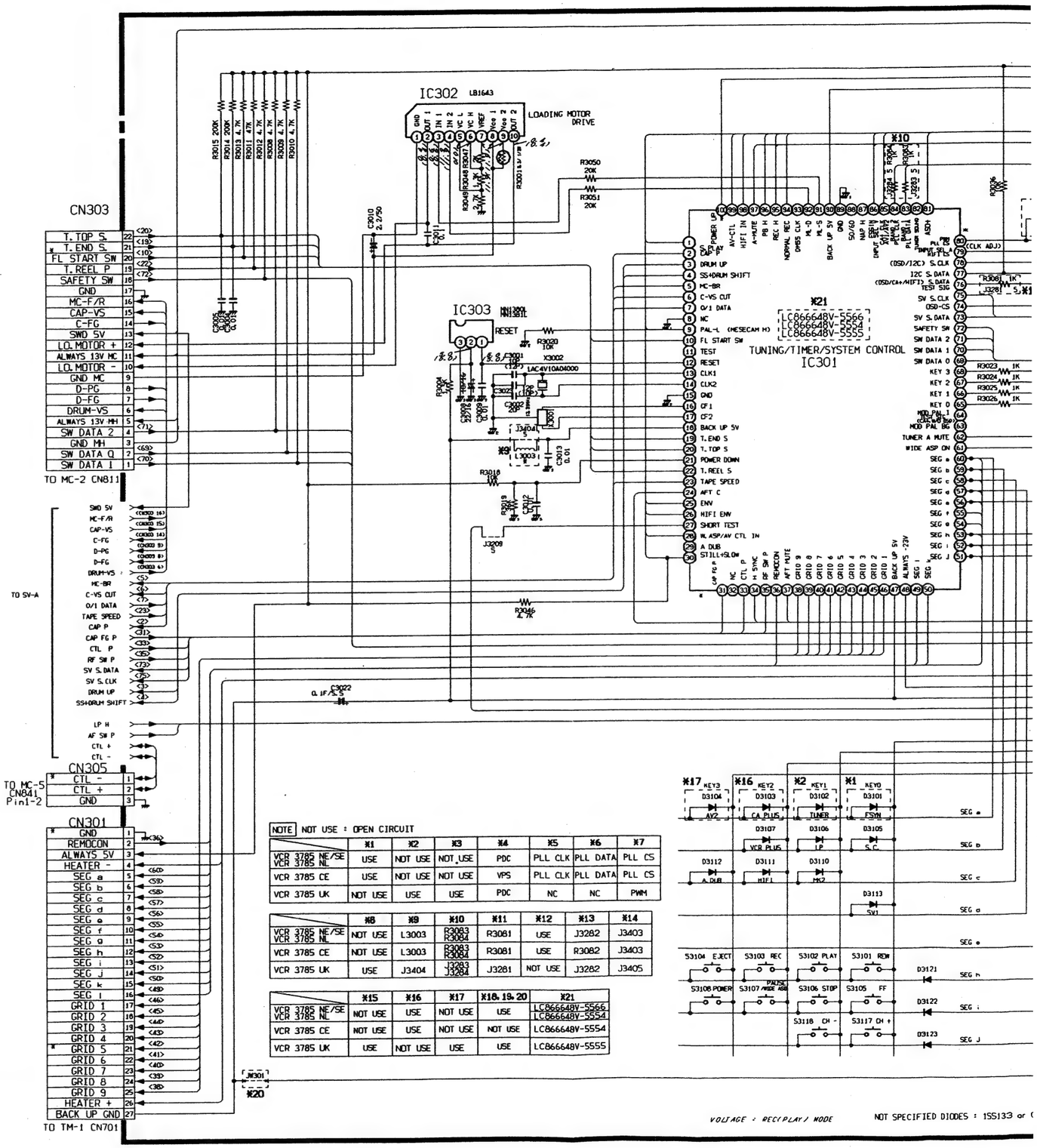
2-11. IC301 SYSTEM CONTROL,TIMER, & TUNING CONTROL MPU PIN FUNCTIONS TABLE

No.	Name	I/O	I/O Signal Function
1	S - PLAY	O	Signal for indicating CUE , REV , STILL and SLOW modes.
2	CAP P.	O	Gain down control for Head Motor Amplifier at SLOW mode.
3	DRUM UP	O	Head drum motor rotation speed up signal.
4	SS + DRUM SHIFT	O	Signal for indicating SLOW/STILL modes and alternation of drum motor control data. (3 value voltage)
5	MC - BR	O	Brake signal for capstan motor.
6	C - Vs CUT	O	Cut off for capstan motor control voltage in SLOW / STILL modes.
7	0 / 1 DATA	I	CTL pulse duty detection signal input. Used for VISS detection.
8	-	-	-
9	PAL- L(MESECAM H)	I	Color system indication signal input.
10	FL- START SW	I	Switch input indicating start of cassette loading or discharge by cassette mechanism.
11	-	-	-
12	RESET	I	Initial reset terminal for this IC.
13	CLK 1	-	Clock OSC during power failures.
14	CLK 2	-	Frequency is 32.768kHz.
15	VSS	-	Ground terminal
16	CF 1	-	IC clock OSC terminal.
17	CF 2	-	Frequency is 13.31MHz.
18	VDD	-	IC power supply terminal.(5Vdc)
19	T. END S.	I	Sensor signal input for tape end detection.
20	T. TOP S.	I	Sensor signal input for tape beginning detection.
21	POWER DOWN	I	Power failure detection terminal.
22	T. REEL S.	I	Pulse input for detection of take-up reel table rotation.
23	TAPE SPEED	I	Input of result of tape speed discrimination by digital servo IC.
24	AFT - C	I	Tuner AFT S-curve signal input for tuner AFT control.
25	ENV.	I	Video head envelope detection signal input for ATR function.
26	HIFI ENV.	I	Hi-Fi audio head envelope detection signal input for ATR function. (Hi-Fi model only)
27	SHORT TEST	I	REC mode indication signal input (REC 5V).
28	W. ASP/ AV CTL IN	I	AV source selection signal input from AV terminal.
29	A DUB	O	Signal for indicating audio dubbing mode.
30	STILL + SLOW	O	STILL or SLOW modes indication signal output.
31	C - FG P.	I	FG signal input of capstan motor.
32	-	-	-
33	CTL P.	I	CTL head recording / playback pulse signal input.
34	H SYNC	I	Sync. signal input for existing channel discrimination and TV system discrimination.
35	RF SW P.	I	RF switching pulse input, created by head drum PG.
36	REMOCON	I	Remote control signal input.
37	AFT MUTE	O	"H" output during TU AFT mute. (V-syn model only)
38	G9	O	Display grid outputs (FLD).
39	G8	O	
40	G7	O	
41	G6	O	
42	G5	O	
43	G4	O	
44	G3	O	
45	G2	O	
46	G1	O	
47	VDD	-	IC power supply input.(5Vdc)
48	V LOAD	O	-23V input for FLD drive.
49	SEG l	O	Display segment outputs (FLD). (Includes key-scan output)
50	SEG k	O	
51	SEG j	O	
52	SEG i	O	
53	SEG h	O	
54	SEG g	O	

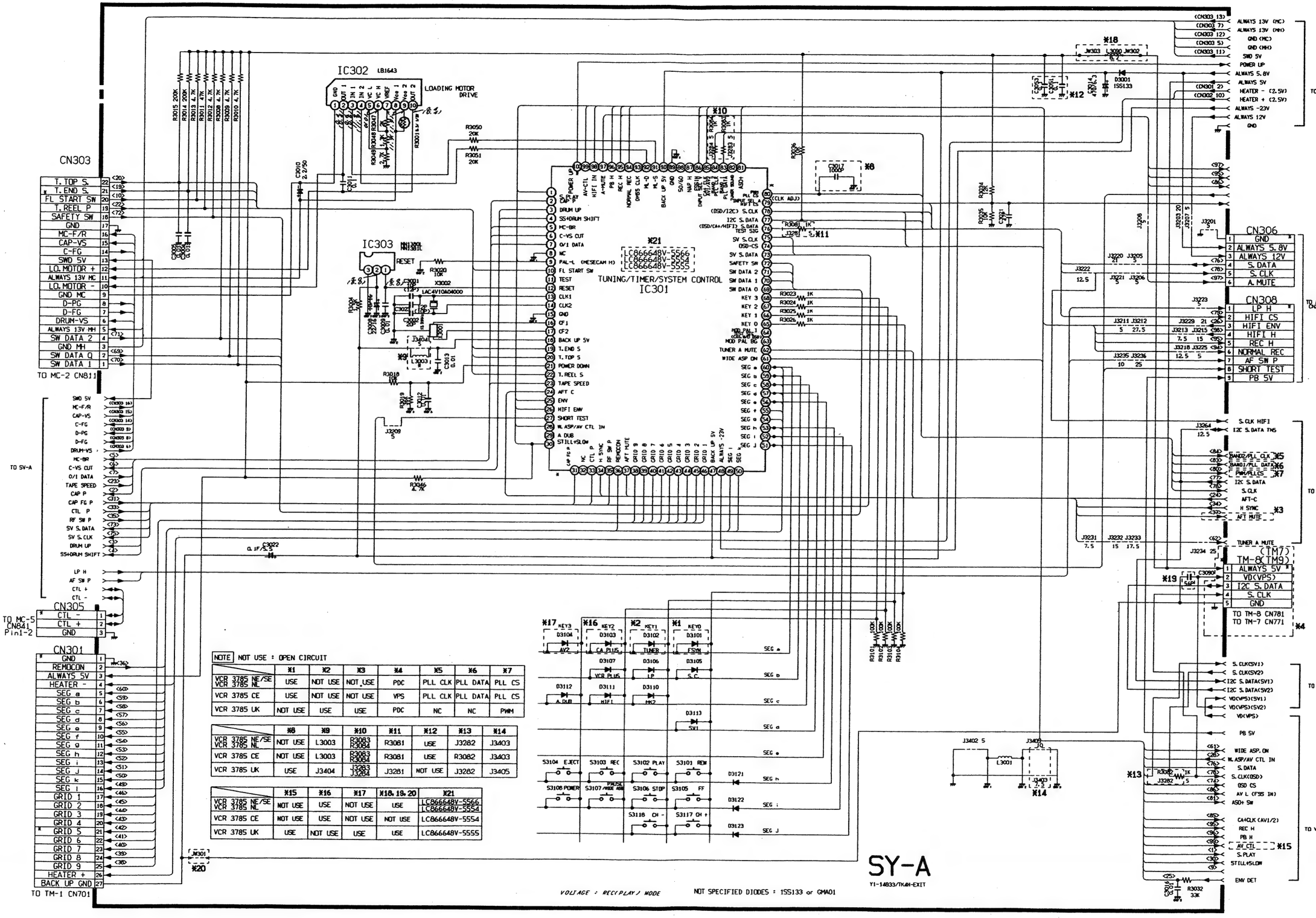
No.	Name	I/O	I/O Signal Function
55	SEG f	O	Display segment outputs (FLD). (Includes key-scan output)
56	SEG e	O	
57	SEG d	O	
58	SEG c	O	
59	SEG b	O	
60	SEG a	O	
61	WIDE ASP ON	O	Signal for wide aspect TV-system indication.
62	TUNER A MUTE	O	Signal for disable tuner-audio output.
63	RF PAL BG	O	Signal for RF output TV-system setting (PAL - BG).
64	RF PAL I	O	Signal for RF output TV-system setting (PAL - I).
65	KEY IN 0	I	Operation key data inputs.
66	KEY IN 1	I	
67	KEY IN 2	I	
68	KEY IN 3	I	
69	SW DATA 0	I	3-bit data indicating operation position of mechanism.
70	SW DATA 1	I	
71	SW DATA 2	I	
72	SAFETY SW	I	Terminal for accidental erasure prevention switch. No operation to record mode while "HIGH" is input.
73	SV S. DATA	O	Output 8-bit X 4 serial data giving operation mode and tracking data,etc., to digital servo IC.
74	OSD CS	O	Chip enable (access) signal output to OSD IC.
75	SV S. CLK	O	The clock pulse for digital servo IC.
76	S. DATA (OSD / CH+ / Hi-Fi)	I/O	Terminal for communication of respective data with OSD IC, CH+ control IC, and Hi-Fi audio IC.
77	I2C S.DATA	I/O	Data exchange with tuning memory IC and VPS IC.
78	S. CLK (OSD/I2C)	O	The clock pulse for OSD IC and tuning memory IC.
79	INPUT SEL A	O	Signal for selecting audio input source.
	HIFI CS	O	Chip enable (access) signal to HI-FI audio IC.
80	PLL CS	O	Chip enable signal output to tuner PLL tuning system IC. (F-syn model)
	TU PWM	O	Tuning voltage output (PWM signal). (V-syn model)
81	-	-	-
82	TU SOUND (I/BG)	O	TV system indication signal output (PAL I or BG).
83	BAND 1	O	Tuning band data(BAND 1 and 2 ; for V-syn model).
	PLL DATA	O	Data exchange with tuner PLL IC (for F-syn model).
84	BAND 2	O	BAND 1 and 2 ; (L,L)=VHF-LOW (L,H)=VHF-HIGH (H,L)=UHF (H,H)=SKIP. (for V-syn model)
	PLL CLK	O	The clock for PLL IC of tuner unit (for F-syn model).
85	CH+ CLK	O	The clock for CH+ input/output source selection IC.
	AV1 / AV2	O	Signal for selecting AV-input (video/audio) source.
86	INPUT SEL V	O	Signal for selecting video input source.
	FSS IN	I	CH+ mode control signal input (CH+ model).
87	NAP H	O	" H " output during NTSC (NAP) playback mode.
88	50 / 60	O	" LOW " output during NTSC (NAP) mode. (60 field mode)
89	VSS	-	IC ground terminal.
90	VDD	-	IC power supply input.(5Vdc)
91	ML- S	O	Loading motor rotation speed (low / medium / high) indication signal.
92	ML- D	O	Loading motor rotation direction (FWD / REV) indication signal.
93	-	-	-
94	NORMAL AD REC	O	Signal for indicating normal audio recording.
95	REC H	O	Signal for indicating recording mode.
96	PB H	O	Signal for indicating playback mode.
97	A MUTE	O	"H" output for disable audio output signal.
98	HIFI IN	I	Hi-Fi mode indication signal input from audio IC.
99	AV CTL	O	AV terminal (pin8 of 21pins AV socket) control signal output.
	ANT / VTR	O	Selection the RF source of ANTENNA or VTR.
100	POWER UP	O	"HIGH" output except when power is off. Indicating that power is ON.

TK14HTTS-A

2-12. CP-1 BOARD (SY-A) SYSTEM CONTROL



2-12. CP-1 BOARD (SY-A) SYSTEM CONTROL



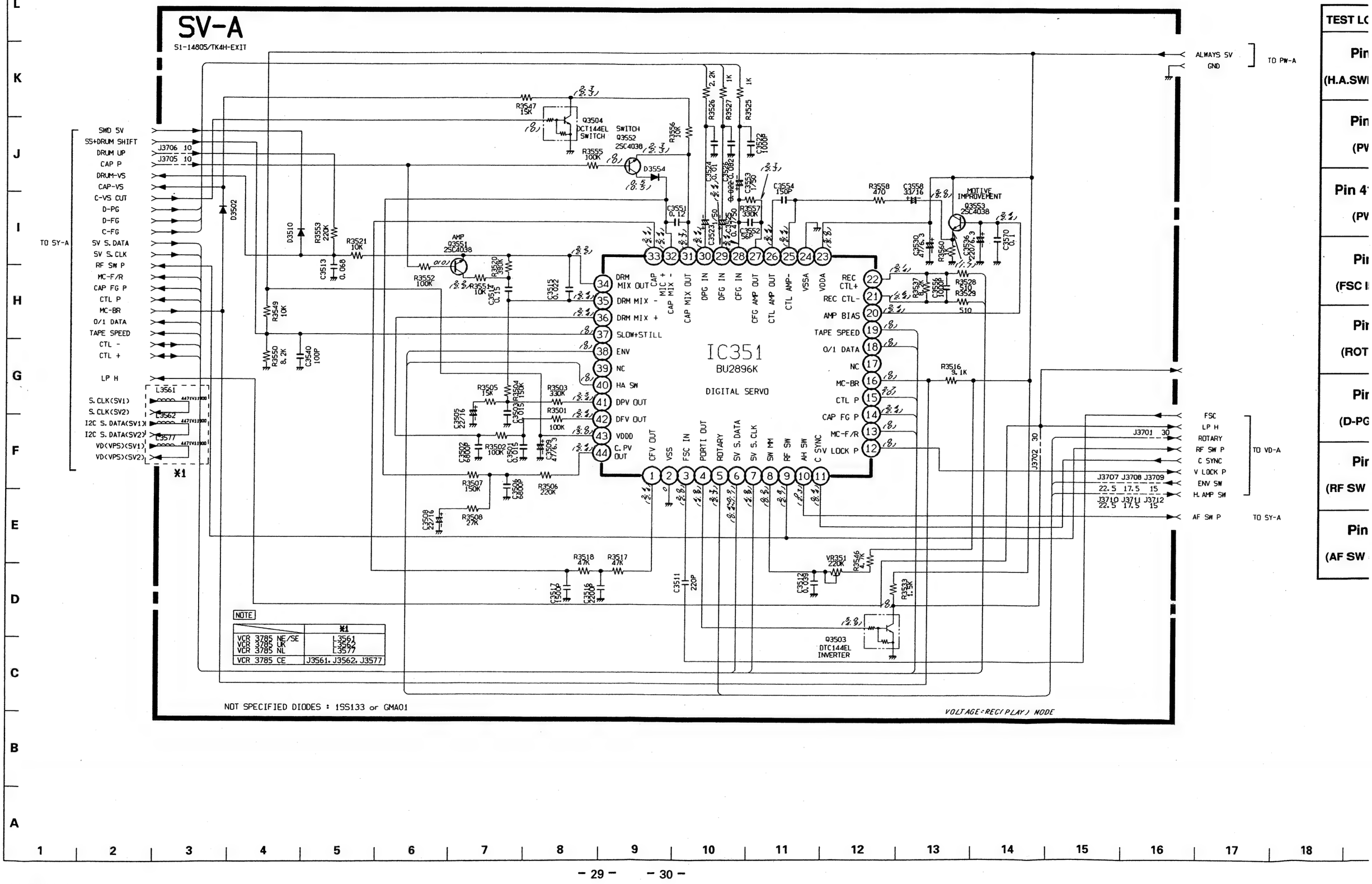
NOTE NOT USE : OPEN CIRCUIT

	※1	※2	※3	※4	※5	※6	※7
VCR 3785 NE/SE VCR 3785 NL	USE	NOT USE	NOT USE	PDC	PLL CLK	PLL DATA	PLL CS
VCR 3785 CE	USE	NOT USE	NOT USE	VPS	PLL CLK	PLL DATA	PLL CS
VCR 3785 UK	NOT USE	USE	USE	PDC	NC	NC	PWM

	※8	※9	※10	※11	※12	※13	※14
VCR 3785 NE/SE VCR 3785 NL	NOT USE	L3003	R3083 R3084	R3081	USE	J3282	J3403
VCR 3785 CE	NOT USE	L3003	R3083 R3084	R3081	USE	R3082	J3403
VCR 3785 UK	USE	J3404	J3283 J3284	J3281	NOT USE	J3282	J3405

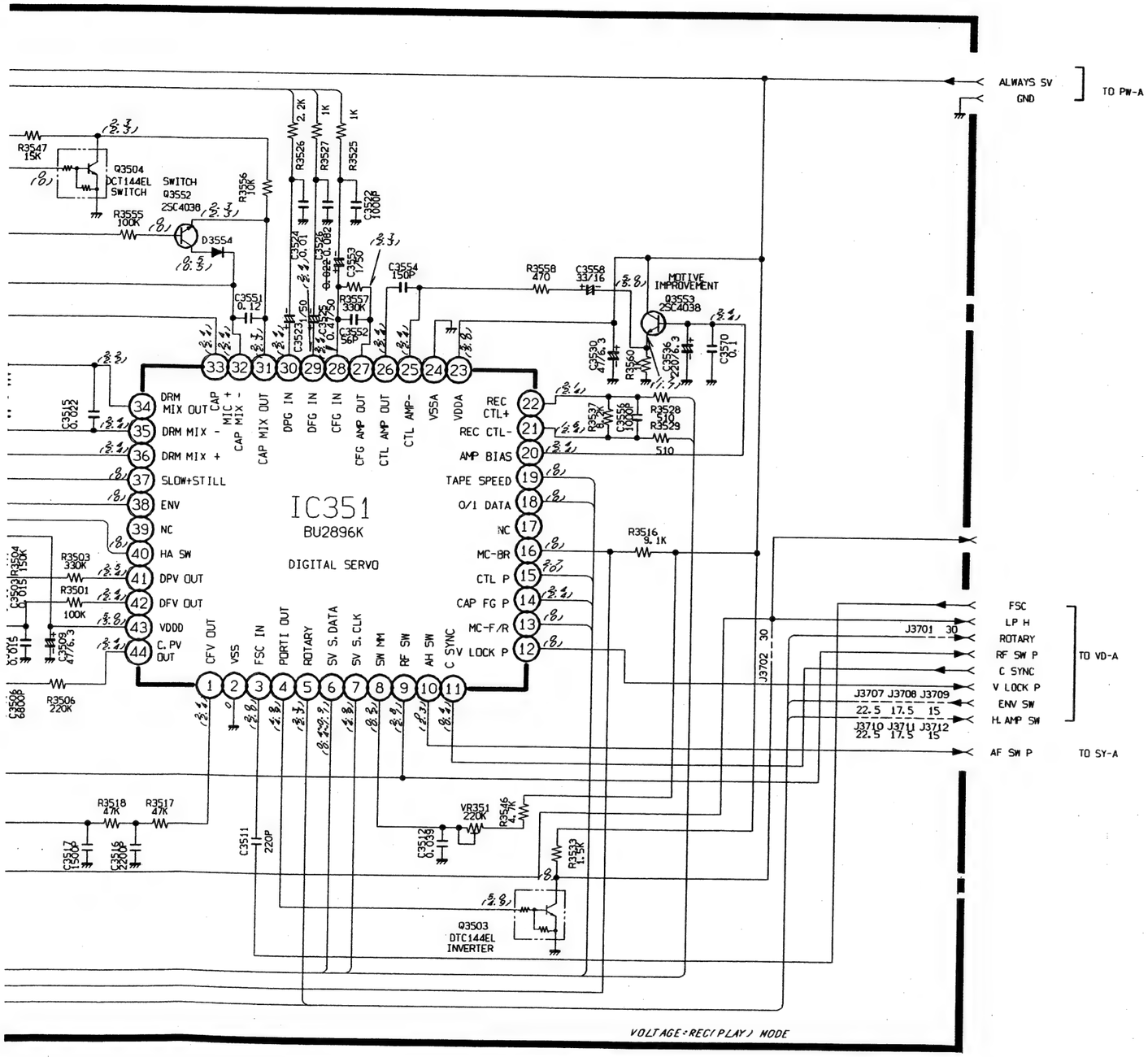
	※15	※16	※17	※18, 19, 20	※21
VCR 3785 NE/SE VCR 3785 NL	NOT USE	USE	NOT USE	USE	LC866648V-5566 LC866648V-5554
VCR 3785 CE	NOT USE	USE	NOT USE	NOT USE	LC866648V-5554
VCR 3785 UK	USE	NOT USE	USE	USE	LC866648V-5555

2-13. CP-1 BOARD (SV-A) SERVO



TEST LO
Pin
(H.A.SW
Pin
(PV
Pin 4
(PV
Pi
(FSC I
Pi
(ROT
Pi
(D-PG
Pi
(RF SW
Pin
(AF SW

2-13. CP-1 BOARD (SV-A) SERVO

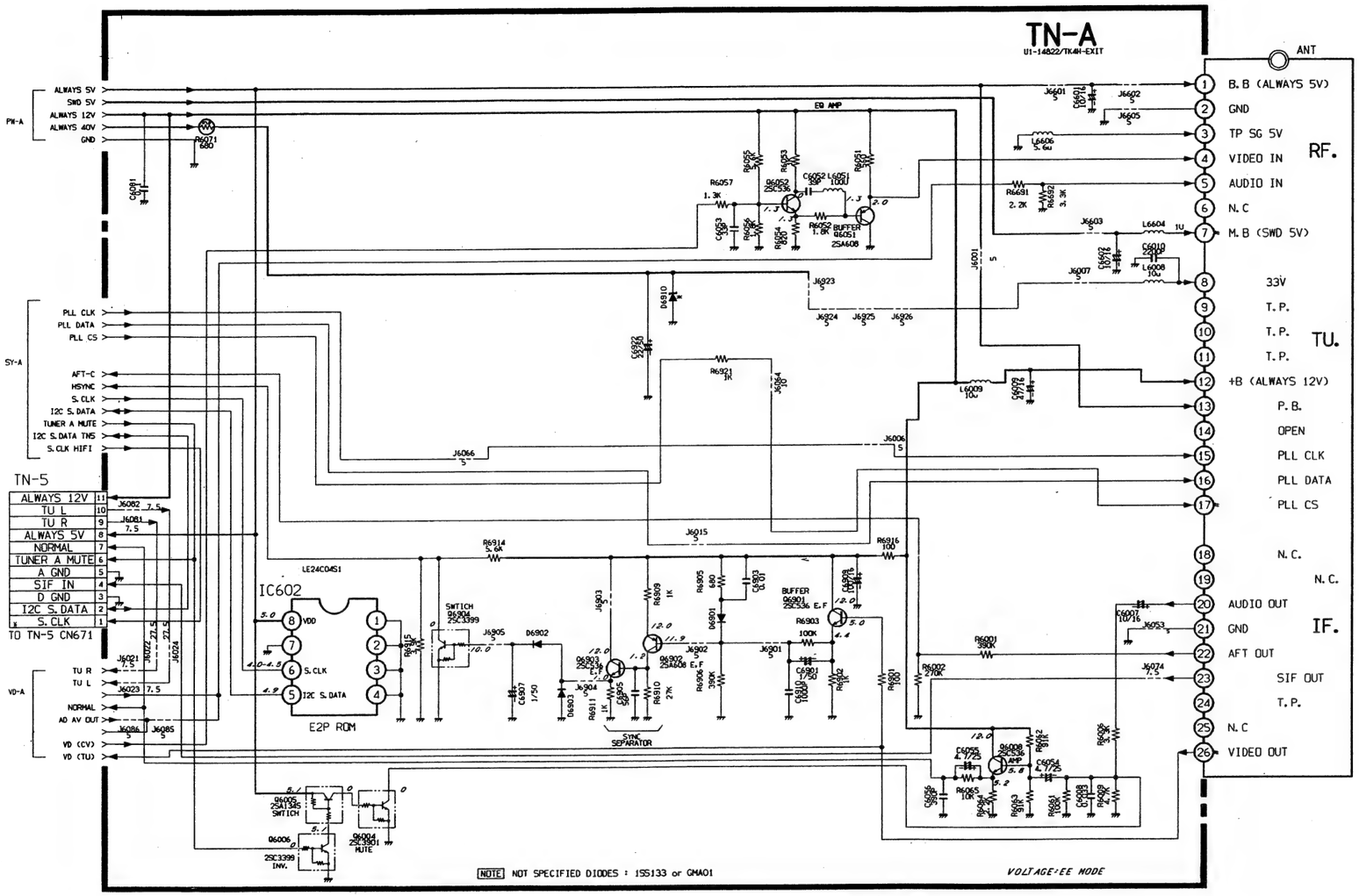


2-14. SERVO CIRCUIT WAVEFORMS (IC351:BU2896 Series)

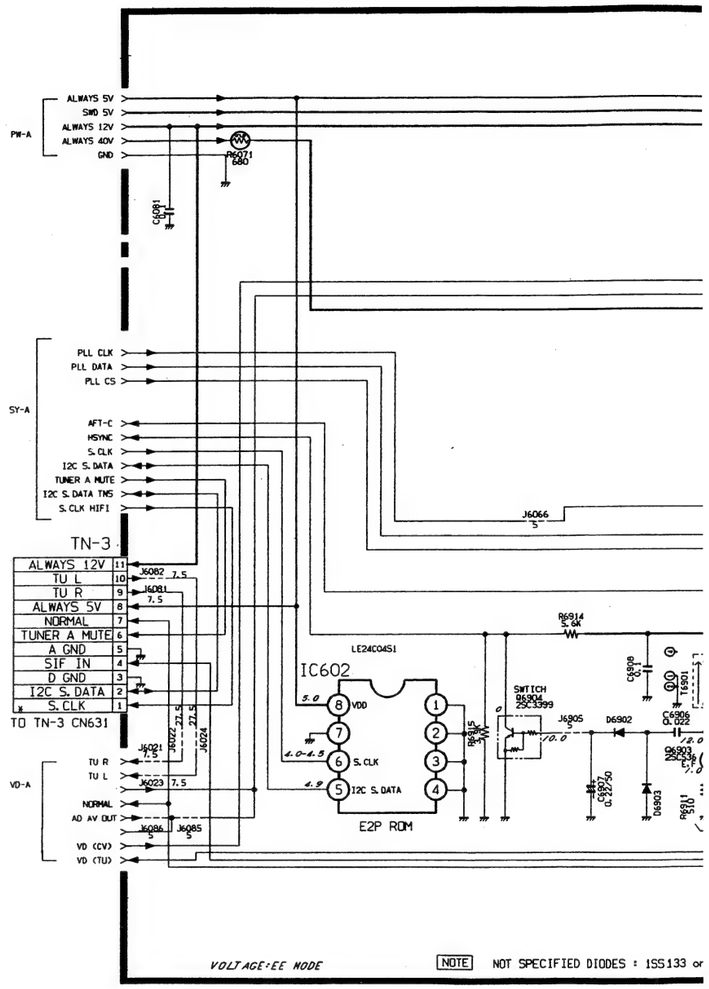
TEST LOCATION	WAVEFORM & MODE/LEVEL	TEST LOCATION	WAVEFORM & MODE/LEVEL
Pin 40 (H.A.SWITCHING)	SLOW PB, 5.0V, 20msec 20msec	**Pin 11** (COMPOSITE SYNC INPUT)	T=20msec, 4.2V
Pin 42 (PWM)	5.0V, 8.66KHz	**Pin 14** (C-FG PULSE)	5.0V, 1513Hz
Pin 41,44,1 (PWM)	5.0V, 69.27KHz	**Pin 15** (CTL PULSE)	PB, 850µsec, 5.0V, 40msec
Pin 3 (FSC INPUT)	0.3Vp-p, 4.43MHz	**Pin 26** (CTL AMP OUT)	PB, 2.0Vp-p, 40msec
Pin 5 (ROTARY)	PB, 5.0V, 20msec 20msec	**Pin 28** (C-FG INPUT)	10mVp-p, 0.66msec
Pin 8 (D-PG MM)	2msec, 2.5V, 7msec	**Pin 29** (D-FG INPUT)	30mVp-p, 1.33msec
Pin 9 (RF SW PULSE)	5.0V, 20msec 20msec	**Pin 30** (D-PG INPUT)	250mVp-p, 40msec
Pin 10 (AF SW PULSE)	PB, 5.0V, 20msec 20msec	**Pin 38** (ENV.SW INPUT)	SLOW PB, 4.0V, 20msec 20msec

WF-S-CE6

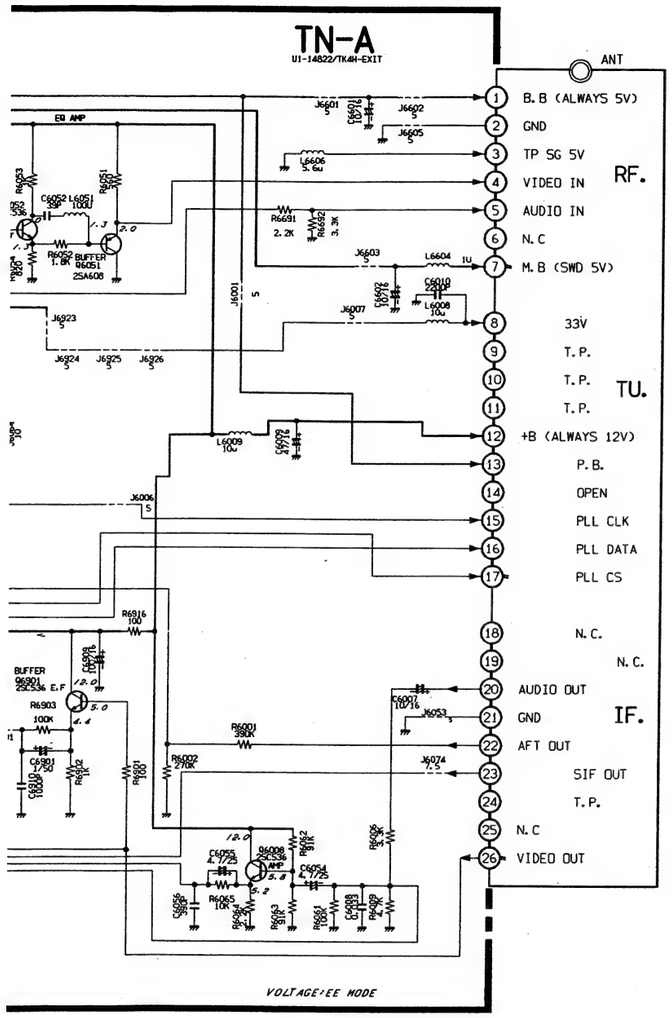
2-15. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR 3785 NE/SE)

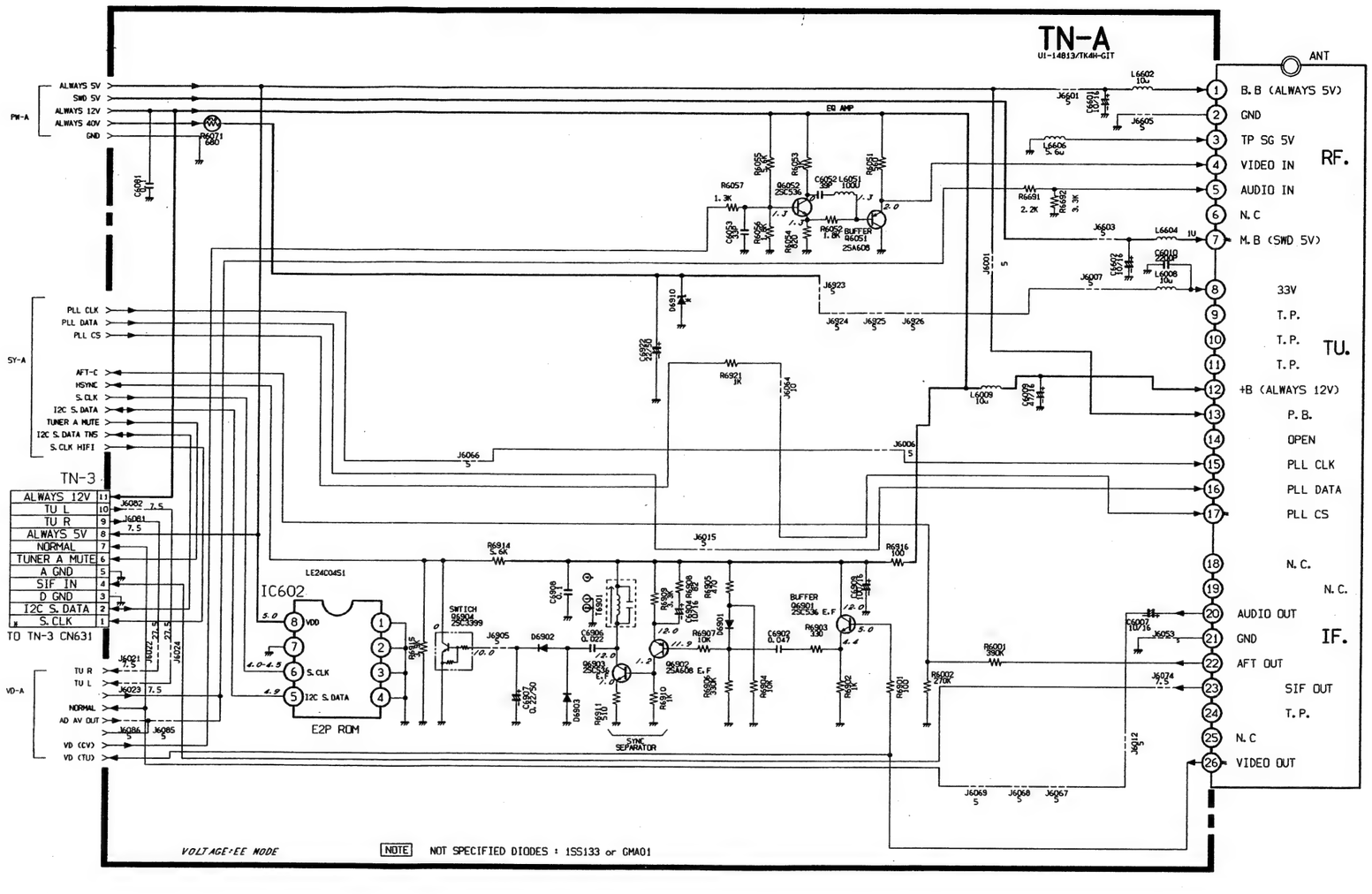


2-16. CP-1 BOARD (TN-



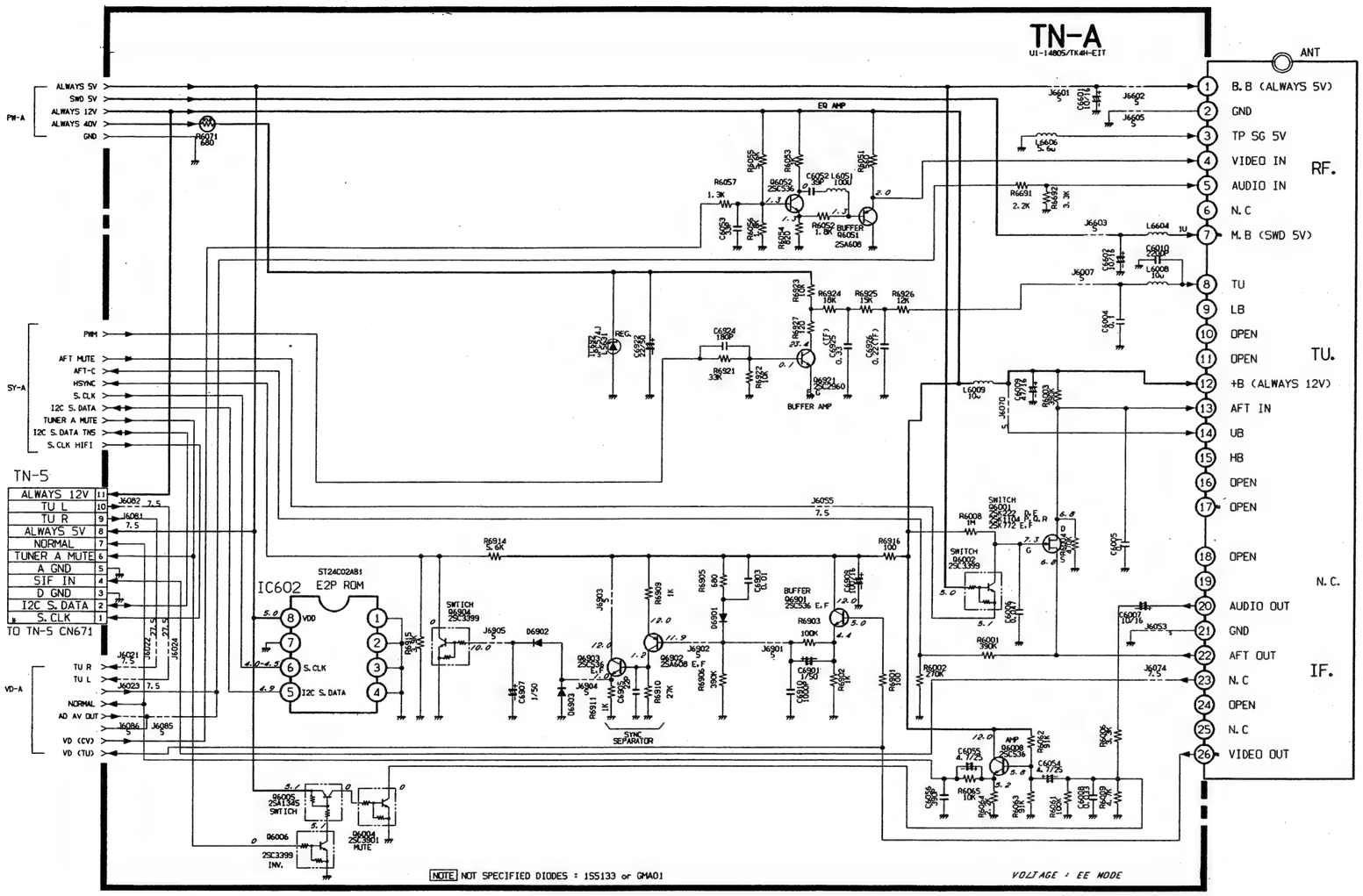
2-16. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR 3785 CE)



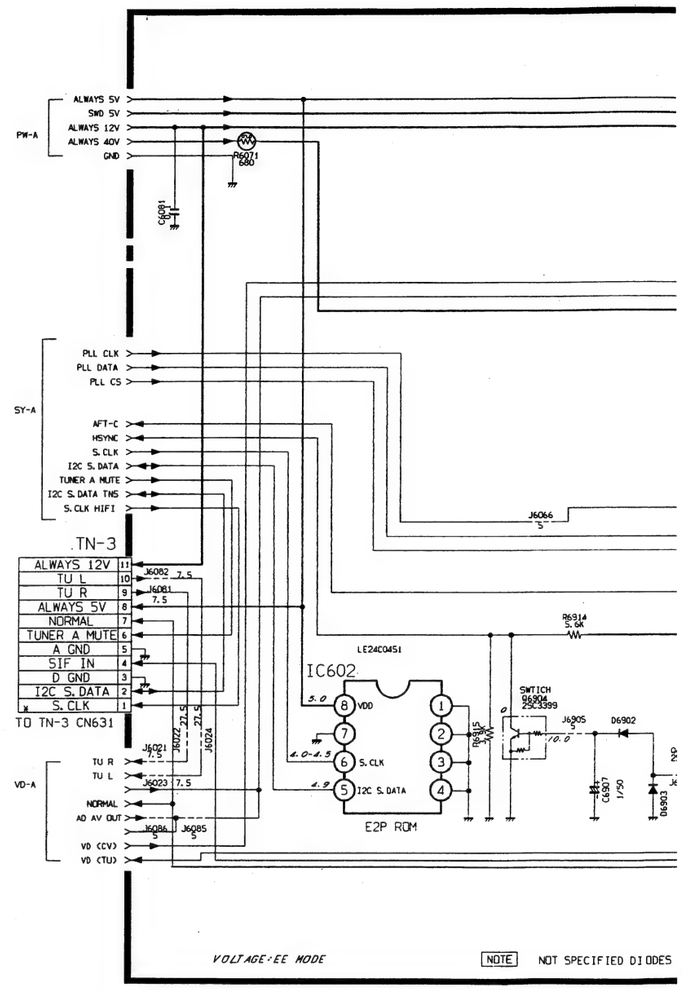


8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

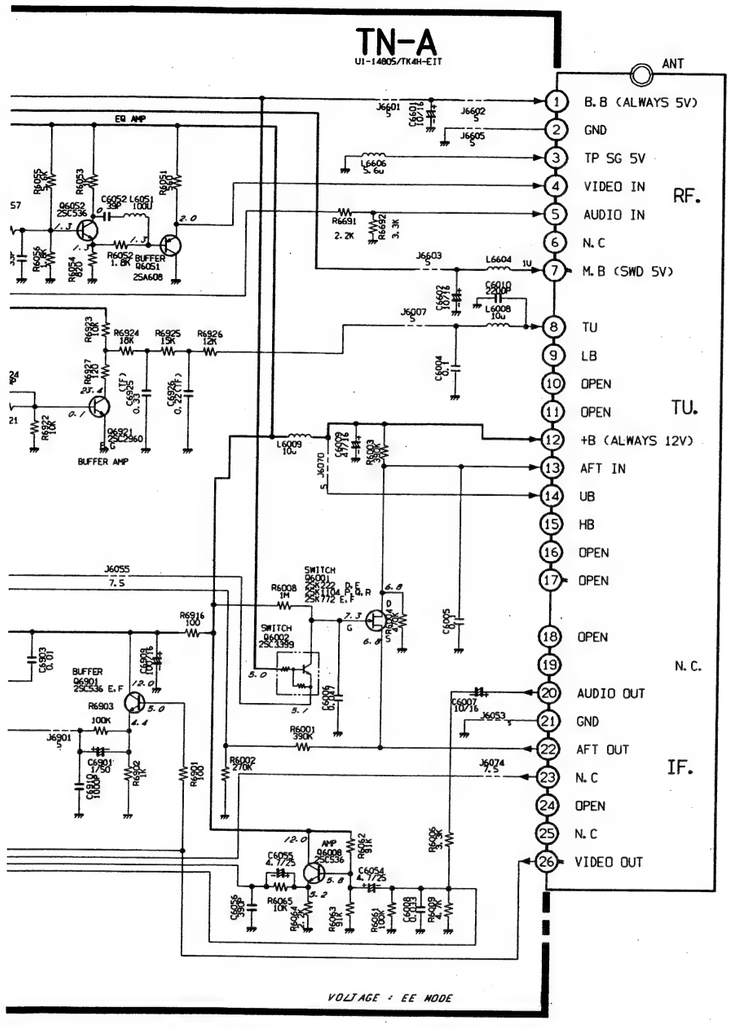
2-17. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR 3785 UK)

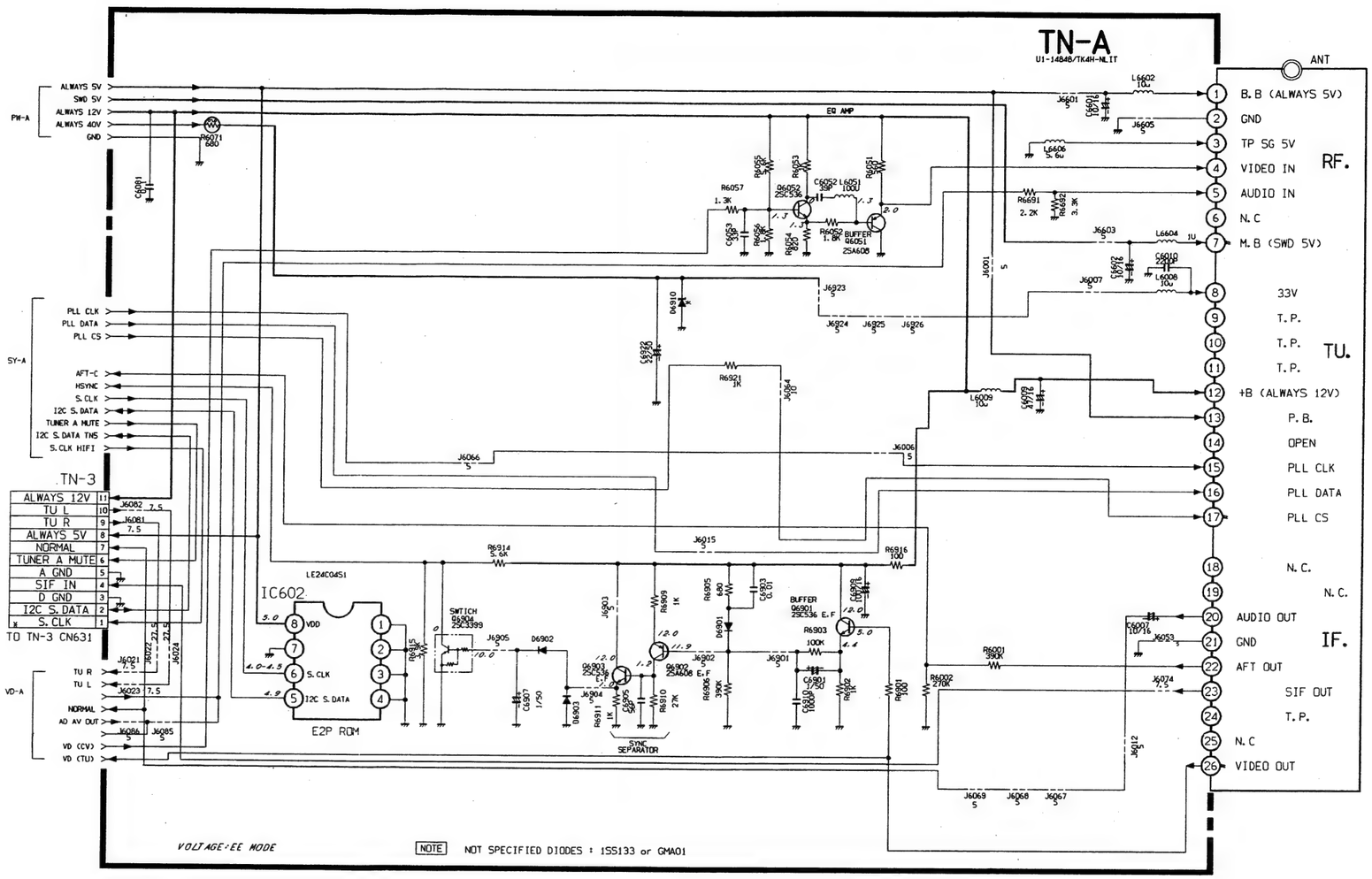


2-18. CP-1 BOARD (TN-A)

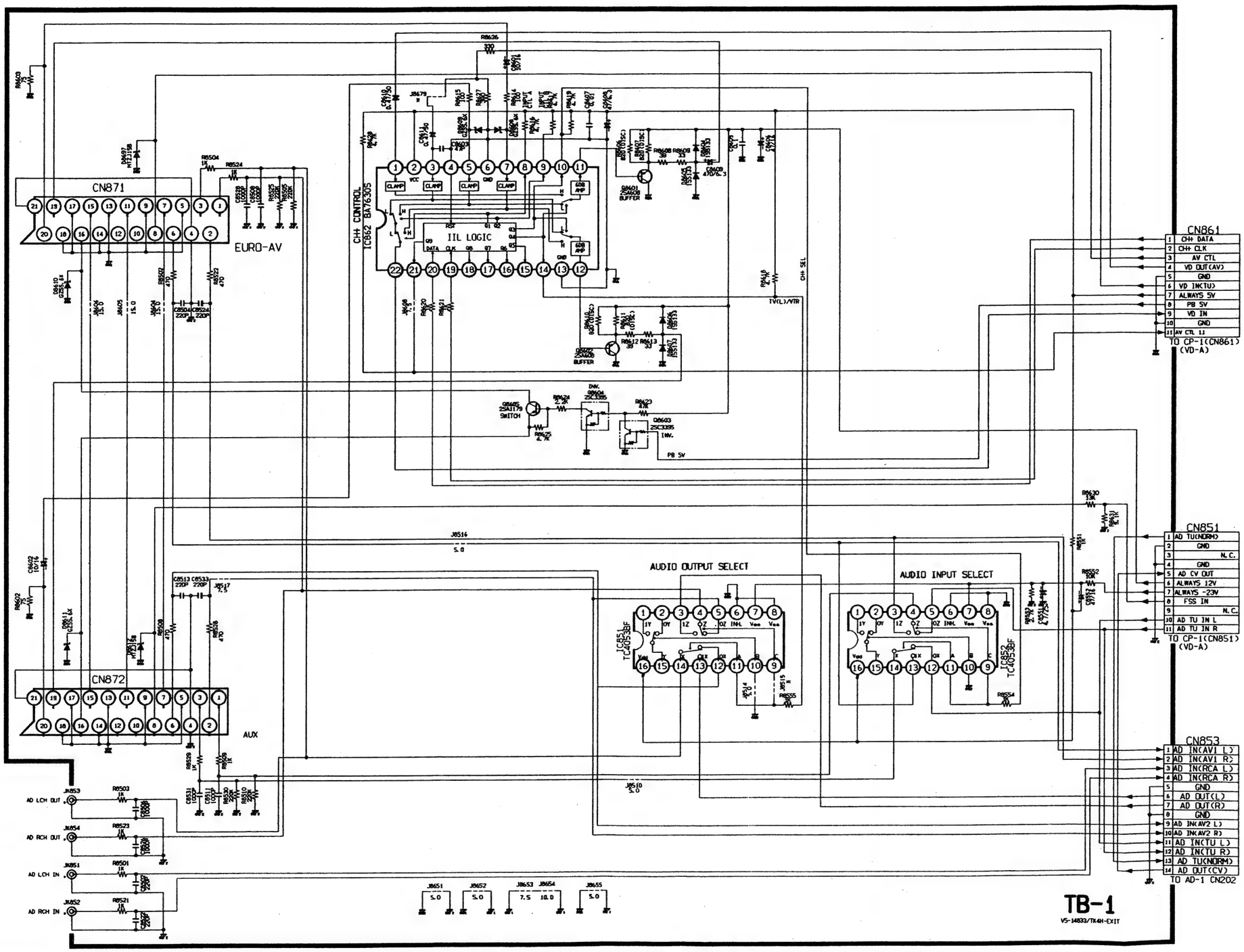


2-18. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR 3785 NL)

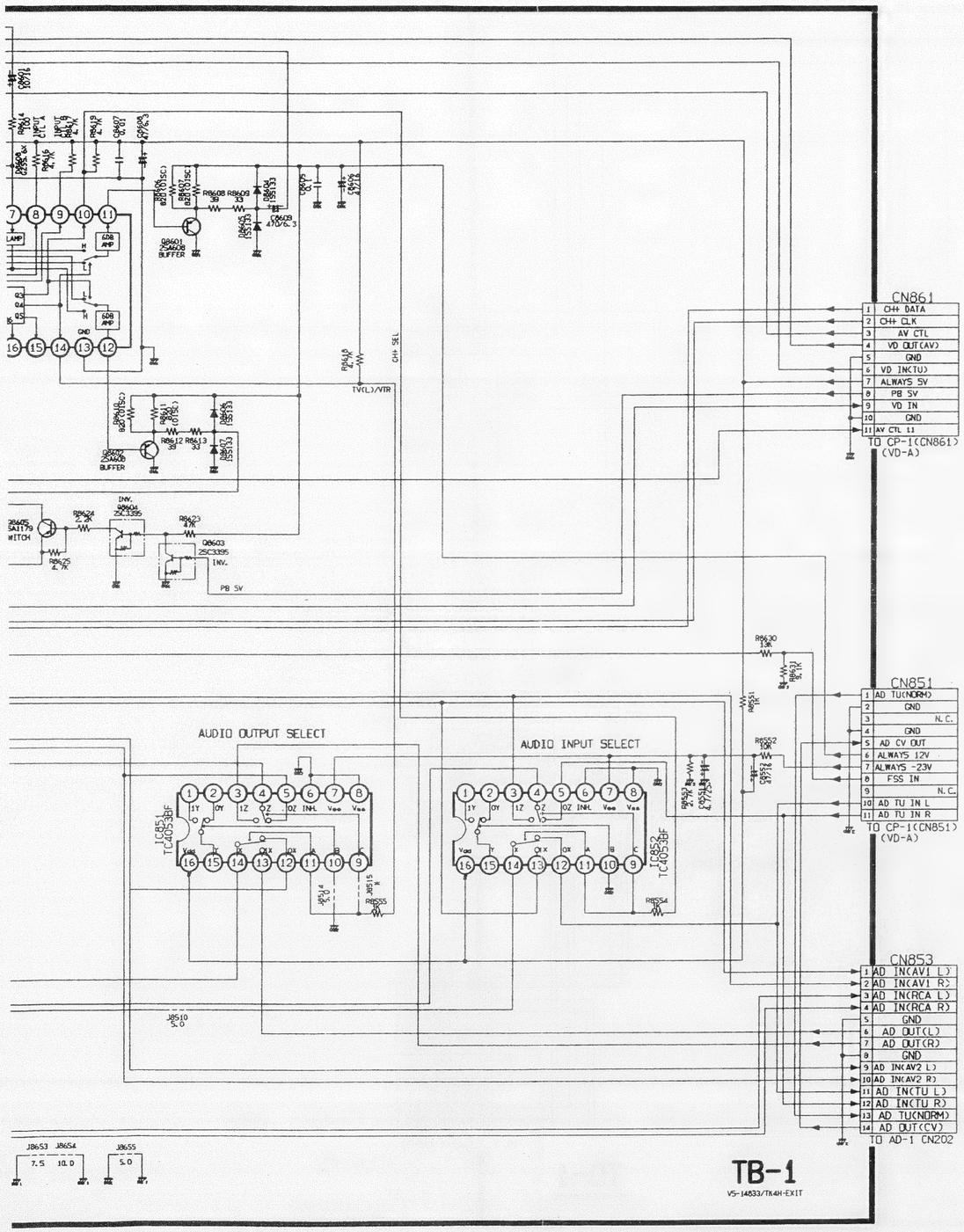




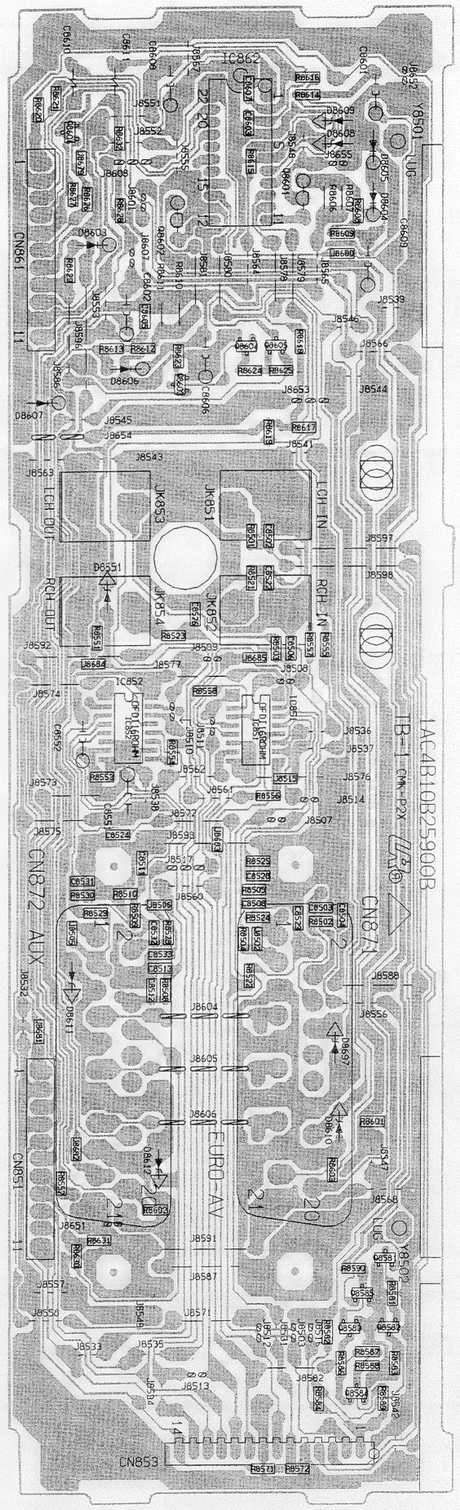
2-19. TB-1 BOARD TERMINAL & INPUT/OUTPUT SELECTION
(VCR 3785 NE/SE, VCR 3785 CE, & VCR 3785 NL)



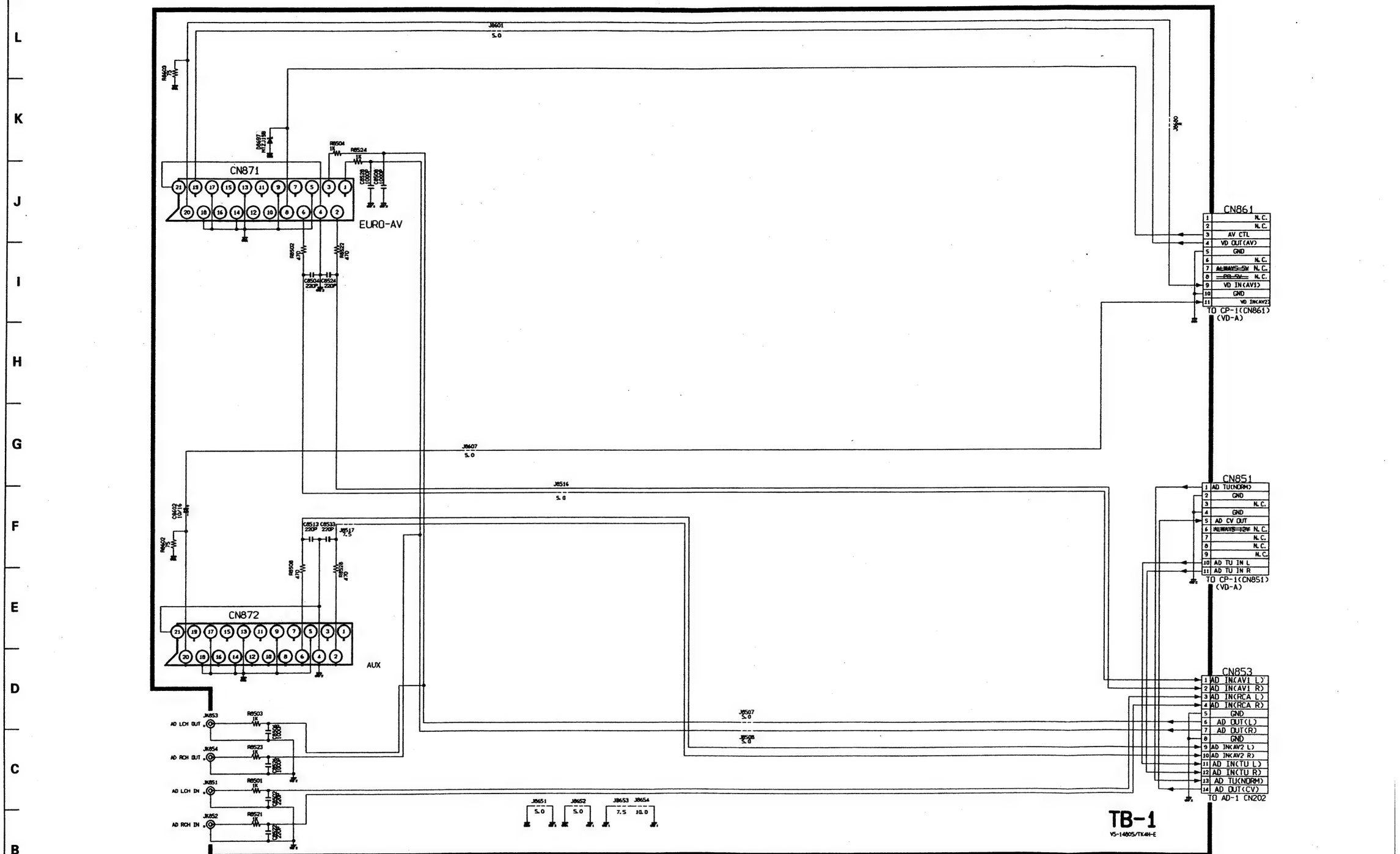
)ARD TERMINAL & INPUT/OUTPUT SELECTION
85 NE/SE, VCR 3785 CE, & VCR 3785 NL)



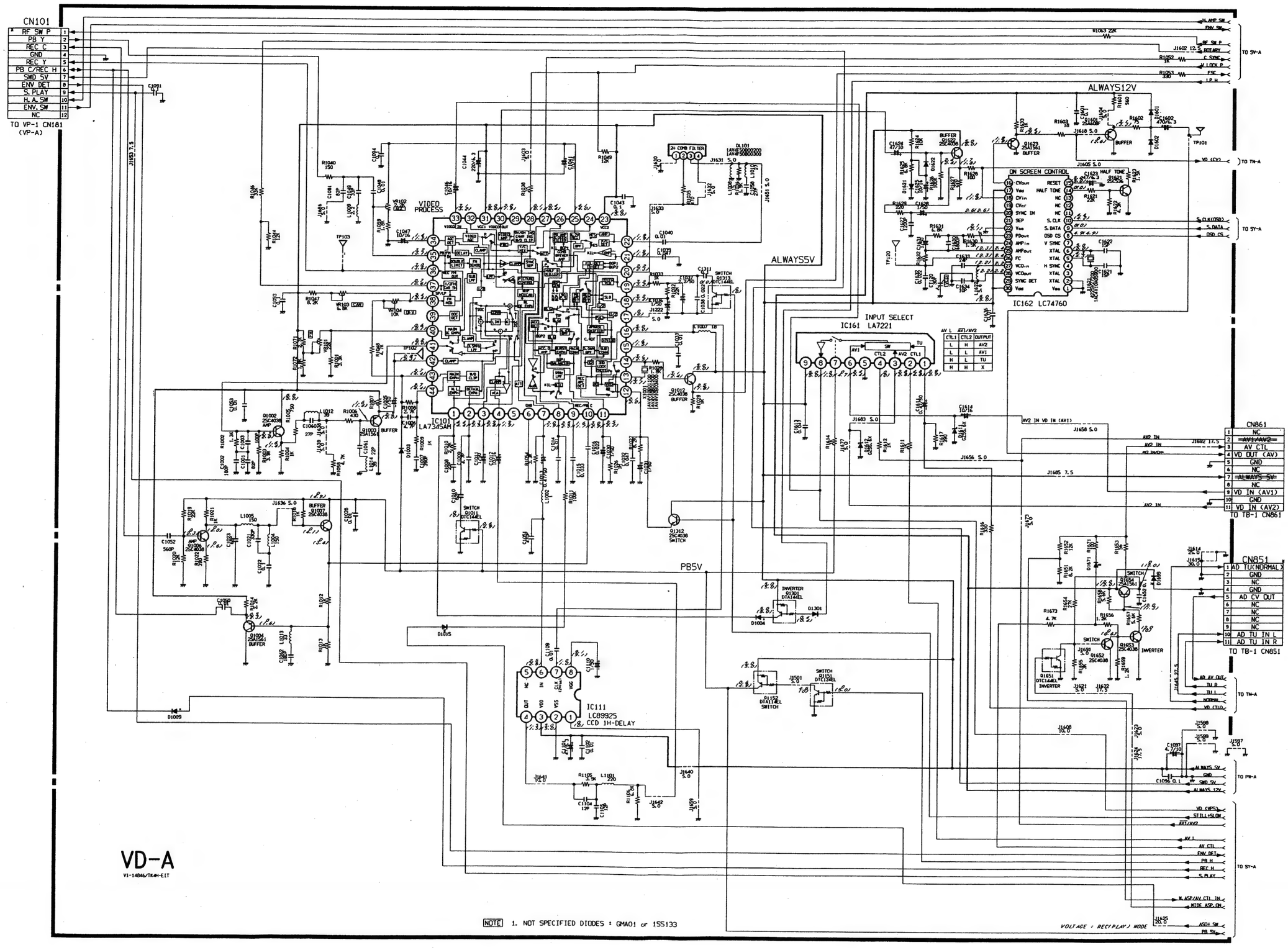
2-20. TB-1 P.W.B.



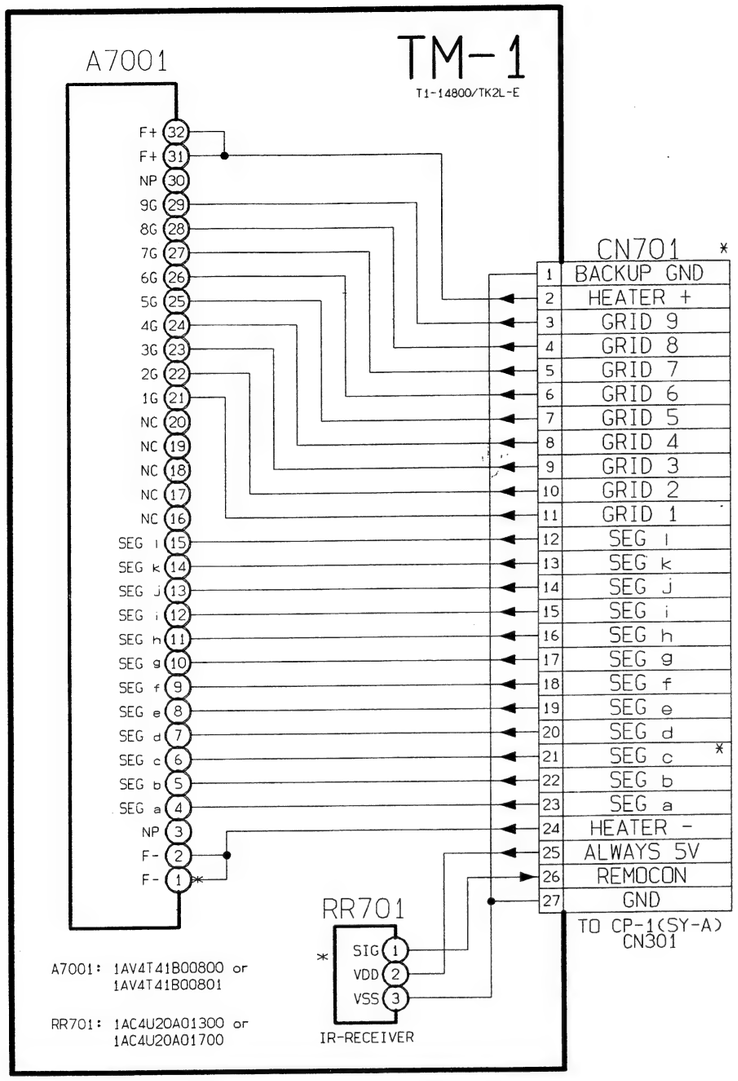
2-21. TB-1 BOARD TERMINAL (VCR 3785 UK)



2-22. CP-1 BOARD (VD-A) VIDEO (VCR 3785 UK)

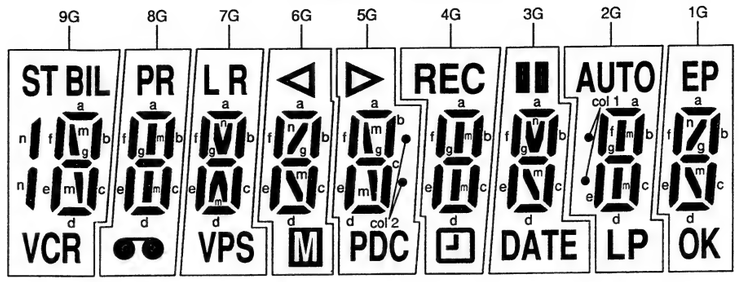


2-23. TM-1 BOARD DISPLAY (FLD)



2-24. A7001 DISPLAY (FLD) GRID/ANODE ASSIGNMENT DRAWING & TABLE

GRID & SEGMENT ASSIGNMENT

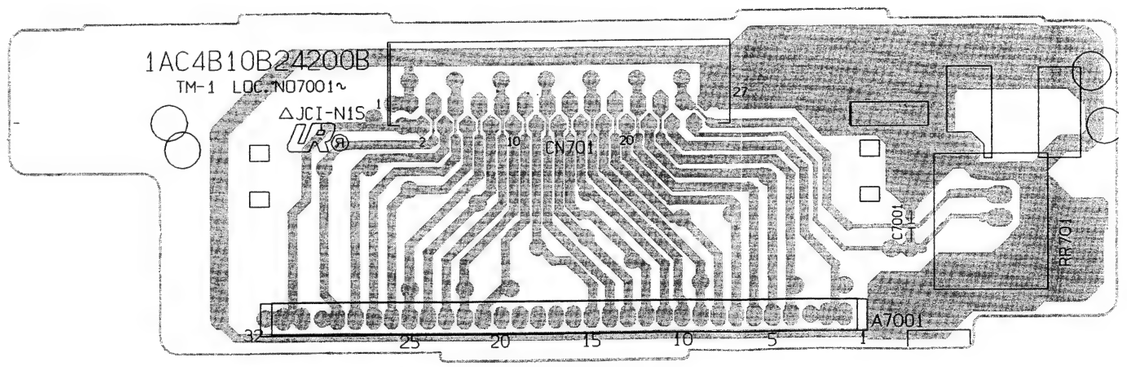


ANODE CONNECTION

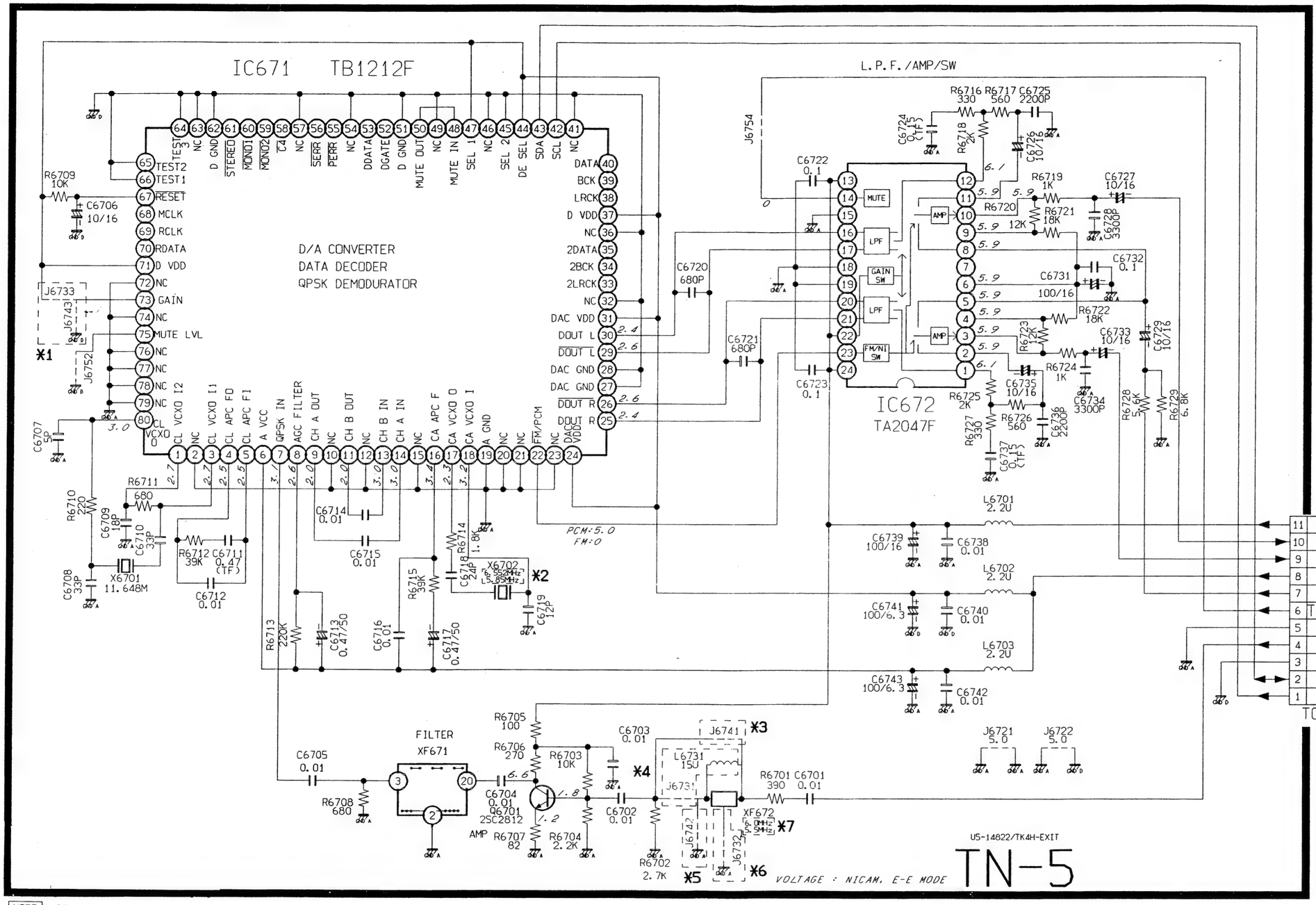
GRID / SEGMENT	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	ST	PR	L	◁	▷	REC	▮▮	AUTO	EP
b	n	—	n	n	—	—	n	—	n
c	a	a	a	a	a	a	a	a	a
d	b	b	b	b	b	b	b	b	b
e	c	c	c	c	c	c	c	c	c
f	d	d	d	d	d	d	d	d	d
g	e	e	e	e	e	e	e	e	e
h	f	f	f	f	f	f	f	f	f
i	g	g	g	g	g	g	g	g	g
j	m	m	m	m	m	m	m	m	m
k	BIL	—	VPS	—	col 2	—	—	col 1	—
l	VCR	👓	R	M	PDC	⏎	DATE	LP	OK

GR-00800

2-25. TM-1 P.W.B.



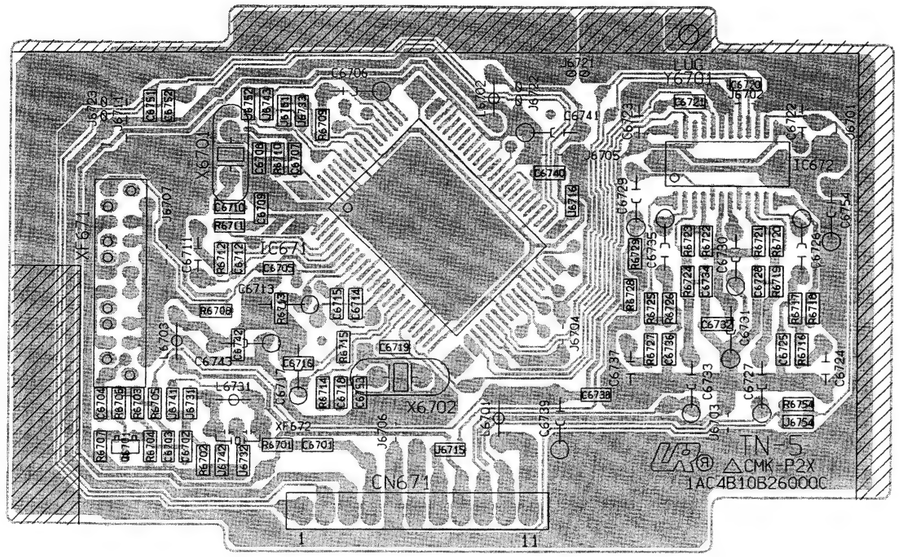
2-26. TN-5 BOARD NICAM (VCR 3785 NE/SE & VCR 3785 UK)



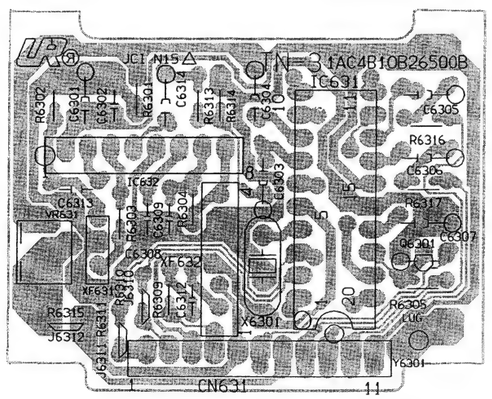
NOTE NOT USE : OPEN CIRCUIT

	✱1	✱2	✱3	✱4	✱5	✱6	✱7
VCR 3785 NE/SE	J6743	5.85MHz	USE	NOT USE	USE	NOT USE	5.5MHz
VCR 3785 UK	J6733	6.552MHz	NOT USE	USE	NOT USE	USE	6.0MHz

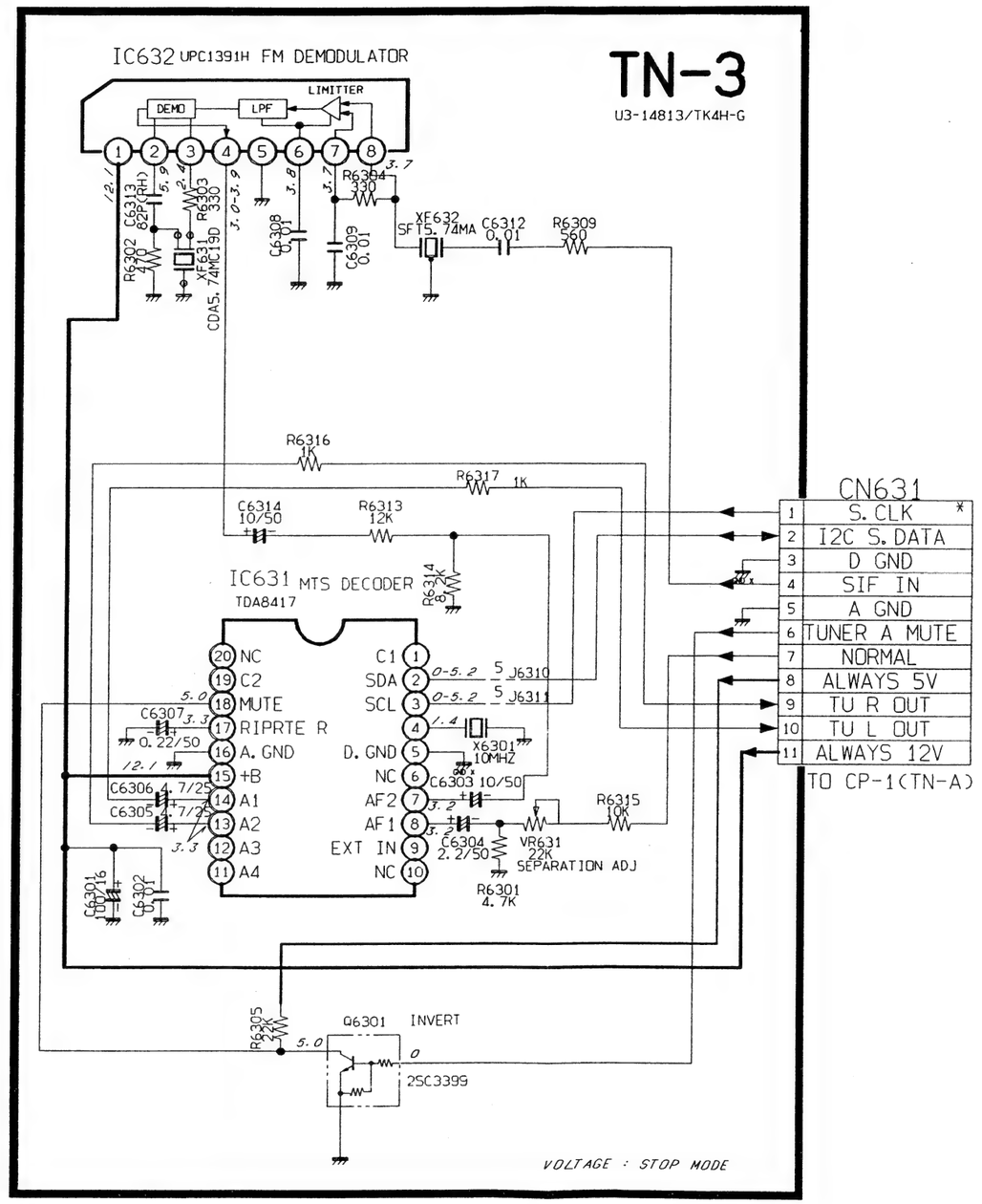
2-27. TN-5 P.W.B. (VCR 3785 NE/SE & VCR 3785 UK)



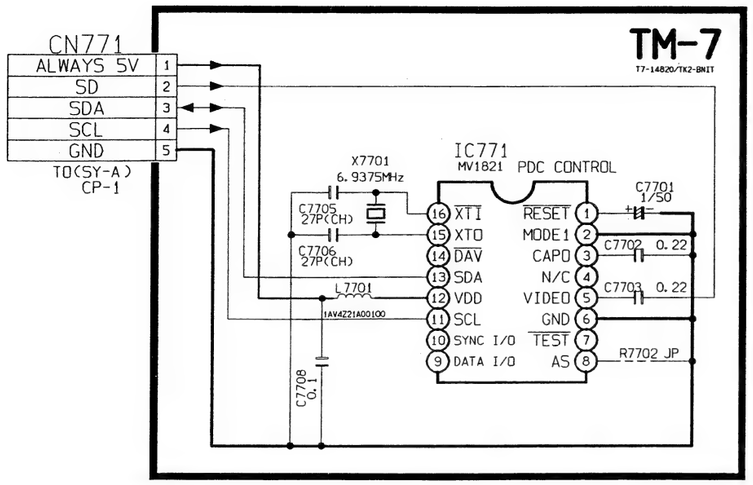
2-28. TN-3 P.W.B. (VCR 3785 CE & VCR 3785 NL)



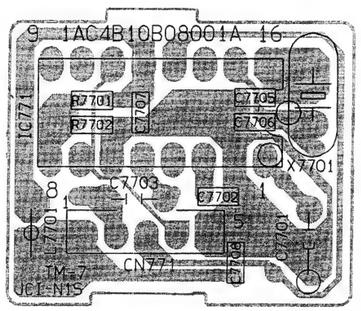
2-29. TN-3 BOARD MTS (VCR 3785 CE & VCR 3785 NL)



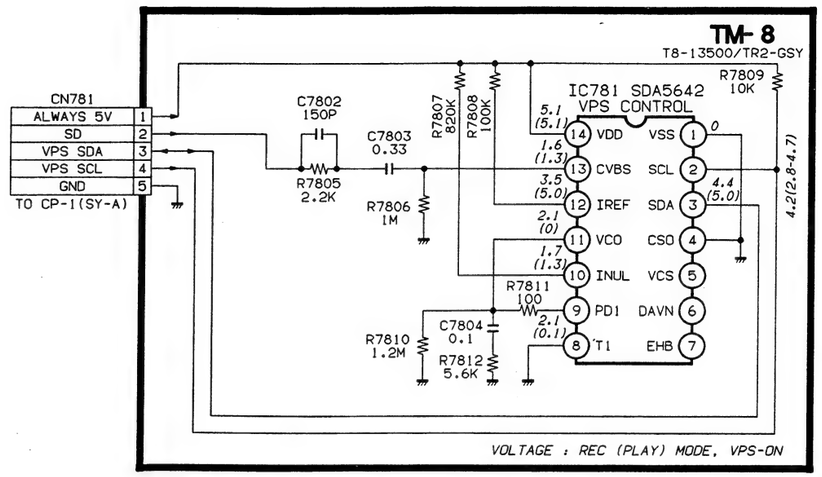
2-30. TM-7 BOARD PDC (VCR 3785 NE/SE, VCR 3785 UK, & VCR 3785 NL)



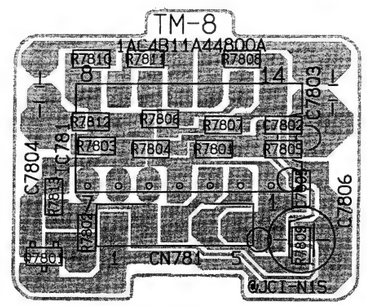
2-31. TM-7 P.W.B. (VCR 37485 NE/SE, VCR 3785 UK, & VCR 3785 NL)



2-32. TM-8 BOARD VPS (VCR 3785 CE)



2-33. TM-8 P.W.B. (VCR 3785 CE)



Service-Manual

VCR

1994

V17585

NOKIA

VCR 3715 CE
VCR 3715 SE
VCR 3715 NE
VCR 3715 BN
VCR 3725 UK
VCR 3725 IR

Circuit diagrams, P.C.B., spare parts list, electrical alignment.

Mechanical adjustments, please, refer to following page.

Safety Component!
⚠ This symbol identifies in the circuit diagrams all safety critical parts. Replace only with specified part numbers.

Service and repair work to be performed only in accordance with existing safety regulations!

+ V12150

NOKIA
CONNECTING PEOPLE

6611 9006

Liste der Service - Manuale **List of Service Manuals** **Liste des manuals**	**Elektrischer Abgleich** **Schaltbilder, Leiterplatten,** **Ersatzteile-Liste** **Electrical alignment** **Circ. diagr., P.C.B.,** **Spare parts list** **Alignement,** **Schémas circ. imprimès,** **liste des pièces détachées**	**Mechanik-Justagen** **Mechanical adjustments** **Mécanique ajustages**
Modell **Model** **Modèle**	**No.**	**No.**
NOKIA VCR 3745 SE NOKIA VCR 3745 UK NOKIA VCR 3745 NE NOKIA VCR 3745 BN NOKIA VCR 3745 CE	6611 90 03	6611 90 10 **Note:** 6611 90 10 is only supplement for '94 series. Basic manual is 6611 77 06 (1990).
SALORA VCR 835 NE/IT LUXOR VCR 4745 NE	6611 90 04	
SALORA VCR 635 NE/IT LUXOR VCR 4715 NE	6611 90 05	
NOKIA VCR 3715 CE NOKIA VCR 3715 SE NOKIA VCR 3715 NE NOKIA VCR 3715 BN NOKIA VCR 3725 UK NOKIA VCR 3725 IR	6611 90 06	
NOKIA VCR 3785 NE/SE NOKIA VCR 3785 CE NOKIA VCR 3785 UK NOKIA VCR 3785 NL	6611 90 07	
SALORA VCR 935 NE LUXOR VCR 4785 NE	6611 90 08	
NOKIA VCR 3715 ES	6611 90 09	

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2. ELECTRICAL ADJUSTMENT 8
3. TEST POINT FOR TAPE PATH ADJUSTMENT 15
4. PARTS LIST 16
ACCESSORIES 16
PACKING MATERIALS 16
CABINET & CHASSIS PARTS 16
MECHANISM PARTS 17
ELECTRICAL PARTS 20

CIRCUIT DIAGRAMS (Refer to the separate volume)

SELF-DIAGNOSIS DISPLAY

This unit displays the results of the self-diagnosis it carries out in two digits on the front panel indicator when problems occur. Although these digits will only roughly tell you what kind of problems have occurred, use them when servicing the unit.

1. Displaying the Self-Diagnosis Results

- Press the STOP button for about 10 seconds continuously. Two digits (see below) showing the results of the self-diagnosis will be displayed for three seconds at the hours part of the timer. All other parts of the timer will go off. The time will automatically return after the three seconds.
- If no mechanism unit problems have occurred up to now, "**00** " will be displayed.

Self-diagnosis digits

2. Self-Diagnosis Results

No.	Problem	Main Possible Cause	Mechanism Operations and State After Occurrence
01	The cylinder motor does not rotate.	• The cylinder motor is faulty. • The control of the cylinder motor is faulty. • The tape winds around the cylinder.	Shifts to the STOP mode.
02	The take-up reel does not rotate.	• The take-up reel is caught. • The belt is faulty. • The take-up torque has decreased.	Shifts to the STOP mode.
03	The capstan motor does not rotate.	• The capstan motor is faulty. • The control of the capstan motor is faulty.	Shifts to the STOP mode.
04	The tape cannot be loaded with the cassette inserted. (But unloading can be performed.)	• Error in the operations of the tape loading mechanism. • Foreign particles in the tape loading mechanism. • The tape end sensor is faulty. • The reel brake of the tape cassette has not been released.	Unloads, shifts to the INITIAL mode, and the power goes off.
05	Tape loading and unloading cannot be performed with the cassette inserted.	• The tape guide is caught. • The loading motor is faulty. • The control of the loading motor is faulty.	The power is forcibly turned off with the mechanism at its current position.
06	Front unloading cannot be performed when ejecting the cassette. (Front loading can be performed.)	• The cassette holder mechanism is faulty. • The front door is caught.	Front loads and shifts to the STOP or INITIAL mode. When the power switch is turned on before eject operations: Shifts to the STOP mode. When the power switch is turned off before eject operations: Shifts to the INITIAL mode and the power goes off.
07	Front loading and front unloading cannot be performed when ejecting the cassette.	• The tape cassette is caught in the cassette holder mechanism. • The gears of the front loading drive mechanism have not engaged properly.	The power is forcibly turned off with the mechanism at its current position.
08	The mechanism becomes 1 (BRAKE) while moving from 2 (STOP, FF/REW), 3(STILL), 4 (PLAY), and to 5 (IDLER).	• The mechanism mode switch contact is faulty.	The power is forcibly turned off with the mechanism at its current position.
09	The mechanism becomes 7 (INITIAL) while moving from 1 (BRAKE), 2 (STOP, FF/REW), 3(STILL), 4 (PLAY), and to 5 (IDLER).	• The mechanism mode switch contact is faulty.	Carries out tape take-up operations, shifts to the INITIAL mode, and the power goes off.

Note: For details of mechanism operations corresponding to the mechanism positions of the self-diagnosis numbers 08 and 09 above, refer to the separate volume on the mechanism manual. These manual reference numbers are shown in the cover.

1. DISASSEMBLY

1-1. REMOVAL OF CABINET, MECHANISM UNIT AND MAIN BOARD

REMOVING THE CABINET PARTS (Fig. 1.1.1)

1. Remove the cabinet and bottom cover by removing the four screws (A) and five screws (B).
2. Remove the front panel by removing the locks of the clamps (C) using a screwdriver, etc. and slightly rotating the bottom part in the direction of the arrow.

Note: Electrical adjustments for the this model can be performed with only the cabinet removed.

REMOVING THE MECHANISM MAIN UNIT (Fig. 1.1.2)

After removing the cabinet parts:

1. Remove the two screws (D), and then remove the bracket.
2. Remove the 22-wire flat cable from the MC-2 PWB, the 8-wire flat cable from the VP-1 PWB assembly and the 6-pin connector from the CP-1 PWB assembly respecfively.
3. Remove the mechanism main unit by removing the two screws (E) and two screws (F).
   Remove, as well, the two screws (G) at the cassette tray side while pressing the tray lock lever as shown in the enlarged view and pushing the cassette tray to the position where the two screw (G) appear.

REMOVING THE CP-1 PWB ASSEMBLY (Fig. 1.1.3)

After removing the cabinet parts and mechanism unit:

1. Pull out the TM-1 PWB assembly while pressing and spreading out the four clamps (H) as shown by the arrows.
2. Remove the two red screws (J). Next, remove the CP-1 PWB assembly by lifting it straight up while pressing and spreading out the two clamps (K) as shown by the arrows.

M-TE1/GIT

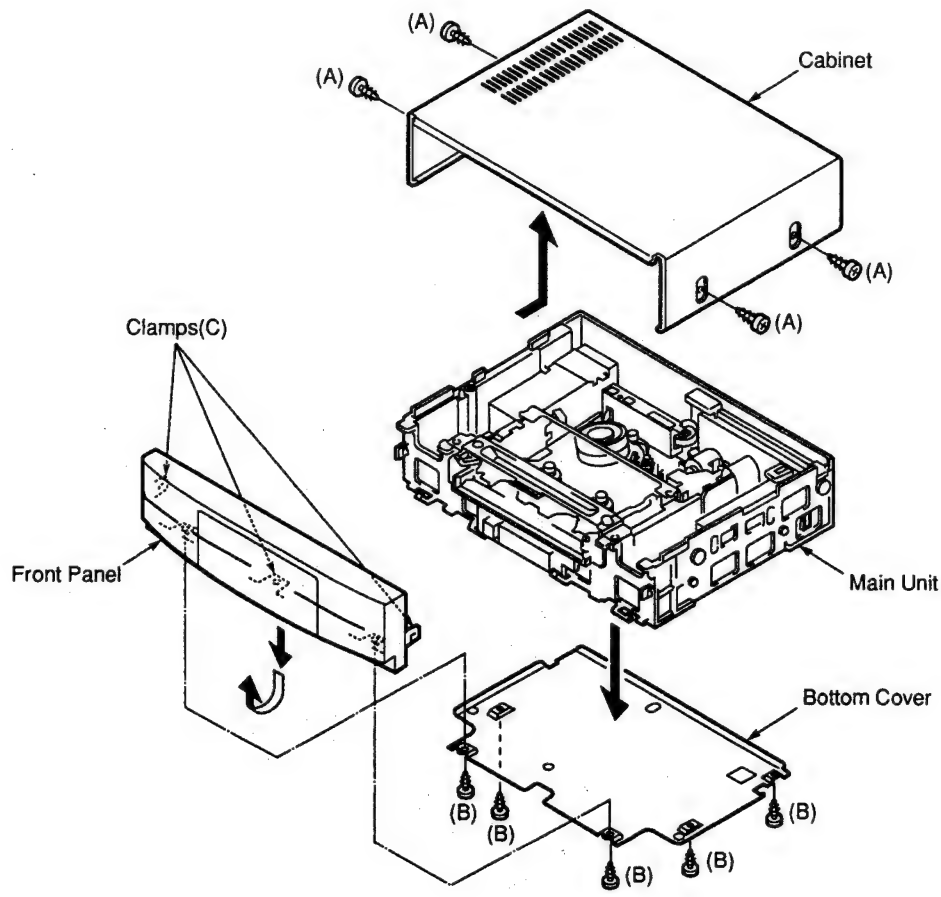


Fig. 1.1.1

M-TK4/E-2

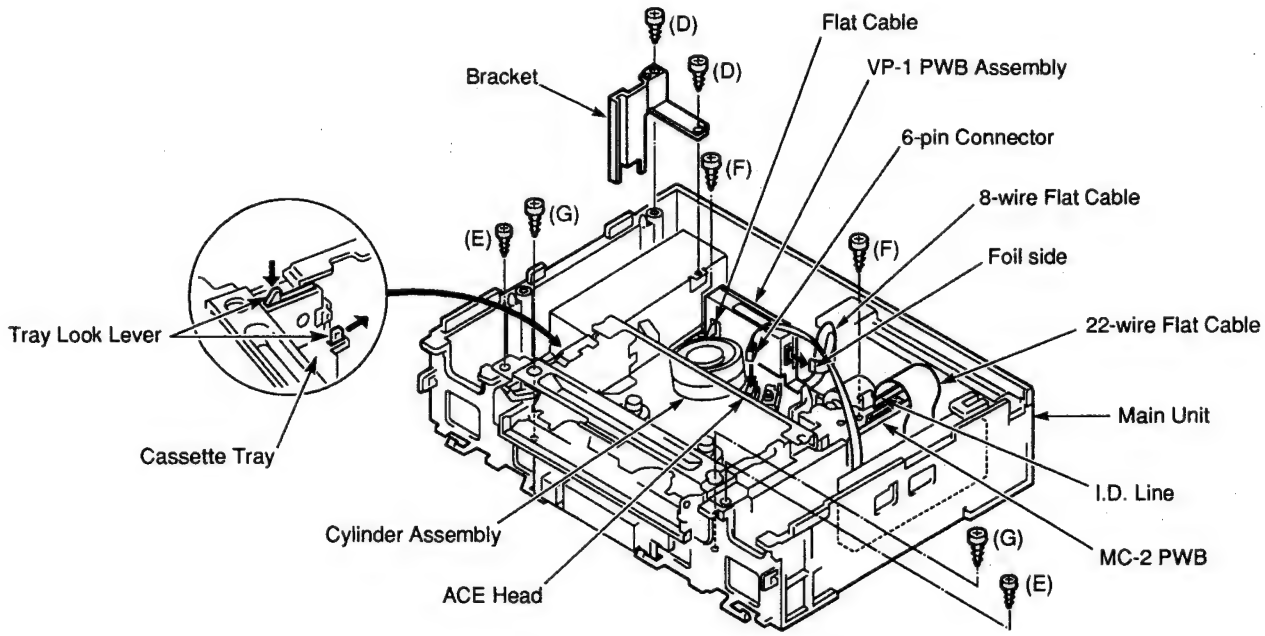


Fig. 1.1.2

M-TK4/E-3

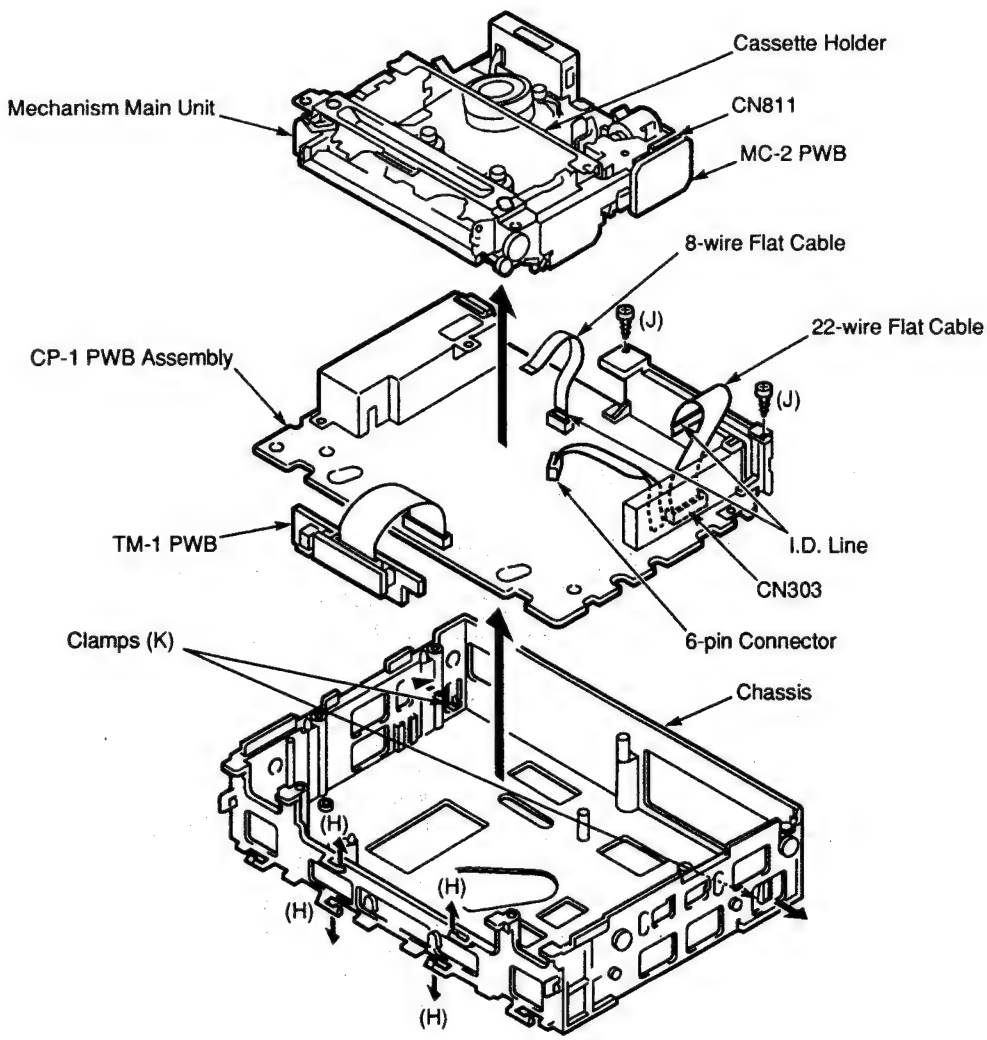


Fig. 1.1.3

TEMPORARILY SETTING UP AND CONNECTING MAIN PWB ASSEMBLY

The following is an example of how to place and connect the main PWB not requiring a jig, when repairing the CP-1 PWB assembly (Fig. 1.1.4)

1. Place the mechanism main unit at the fixed position on the chassis.
2. Connect the 22-wire flat cable to the MC-2 PWB, and the 8-wire flat cable to the VP-1 PWB assembly.
3. Place the CP-1 PWB assembly above the mechanism main unit along the cassette holder. Insert the tip (L) of the terminal board into the opening (M) at the side of the chassis, as shown in the enlarge view.

M-TK4/E-4

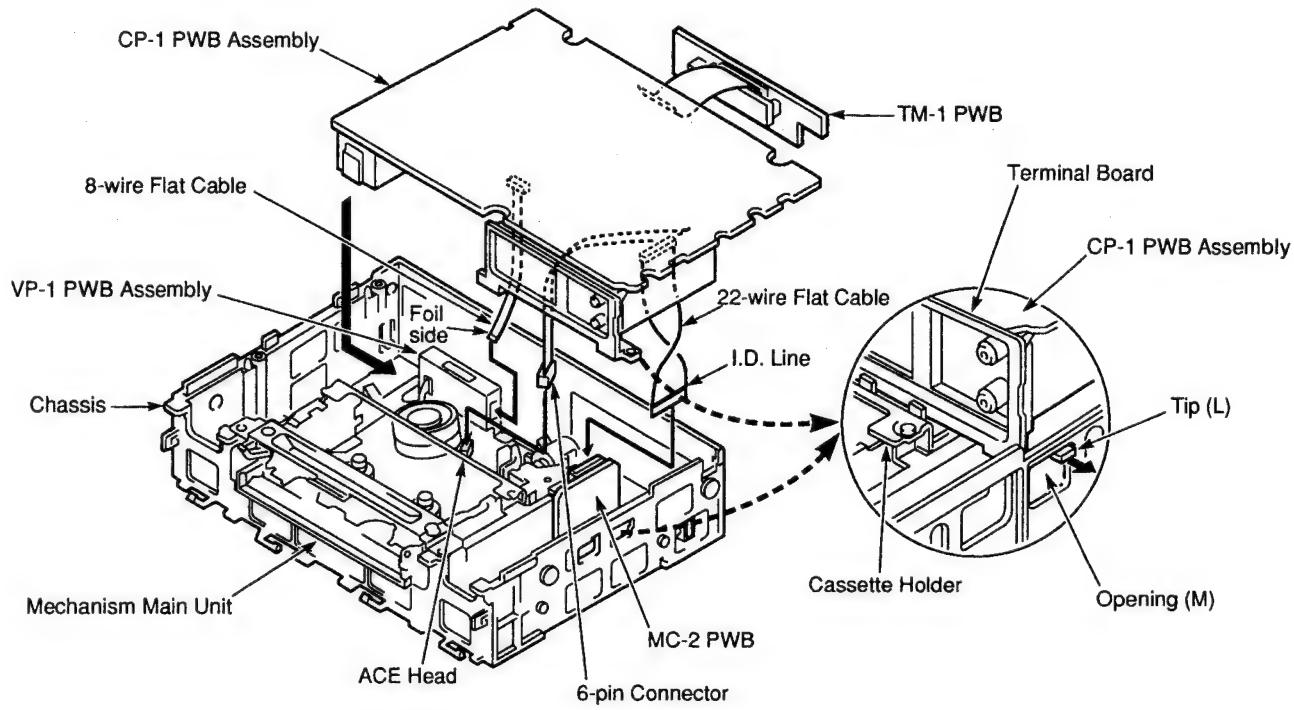


Fig. 1.1.4

1-2. MAIN CIRCUIT BOARD

L-TK4/EXIT

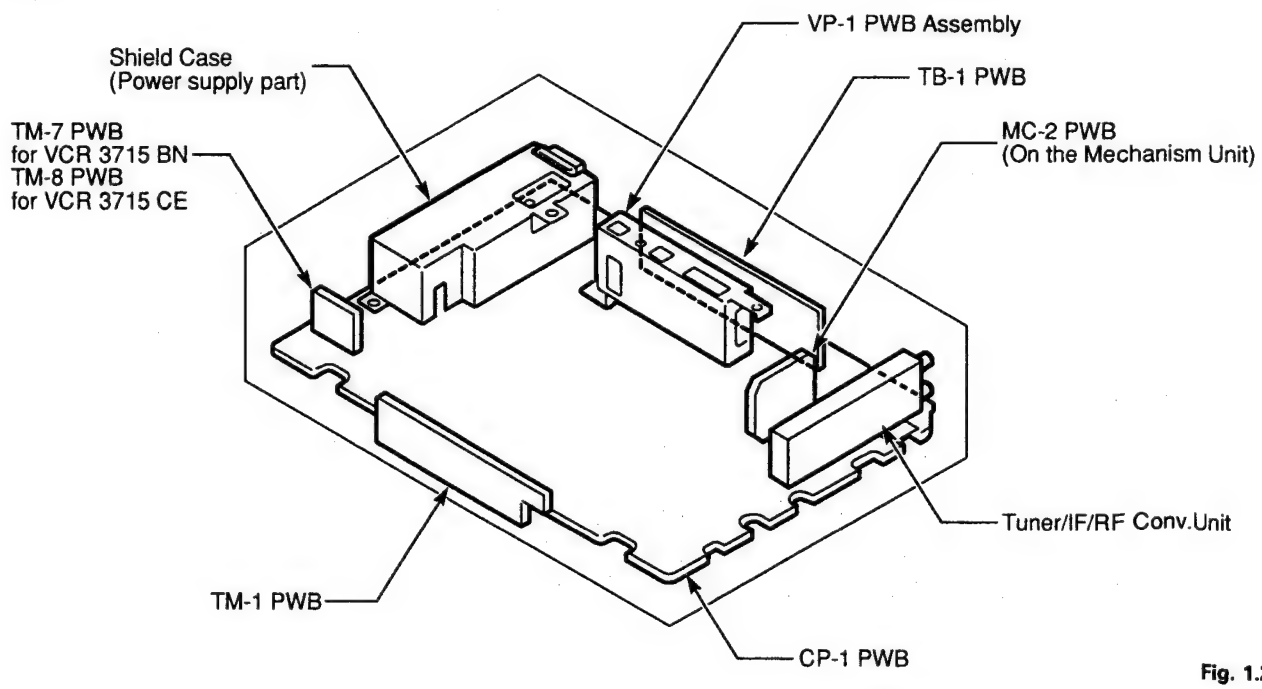


Fig. 1.2.1

2. ELECTRICAL ADJUSTMENT

PREPARATION

This VCR need 3 basic presetting by using the menus displayed on-screen.
After all connection have been made, then follow steps 1 to 3 to preset the VCR.
The 3 presetting steps will be displayed in sequence on TV screen. The setting are entered with the remote control.

Turn on the VCR

1. Adjusting the TV receiver to the video channel: The WELCOME screen will appear. When the video channel has been preset, press the OK button on the remote control.
2. Language selection: Select the desired language, then press the OK button.
3. Tuning control adjustments: When the channel position has been preset, press the MENU/TV button.
   When steps 1 to 3 have been finish, ready to operate the all operating mode.

2-1. SERVO CIRCUIT ADJUSTMENT

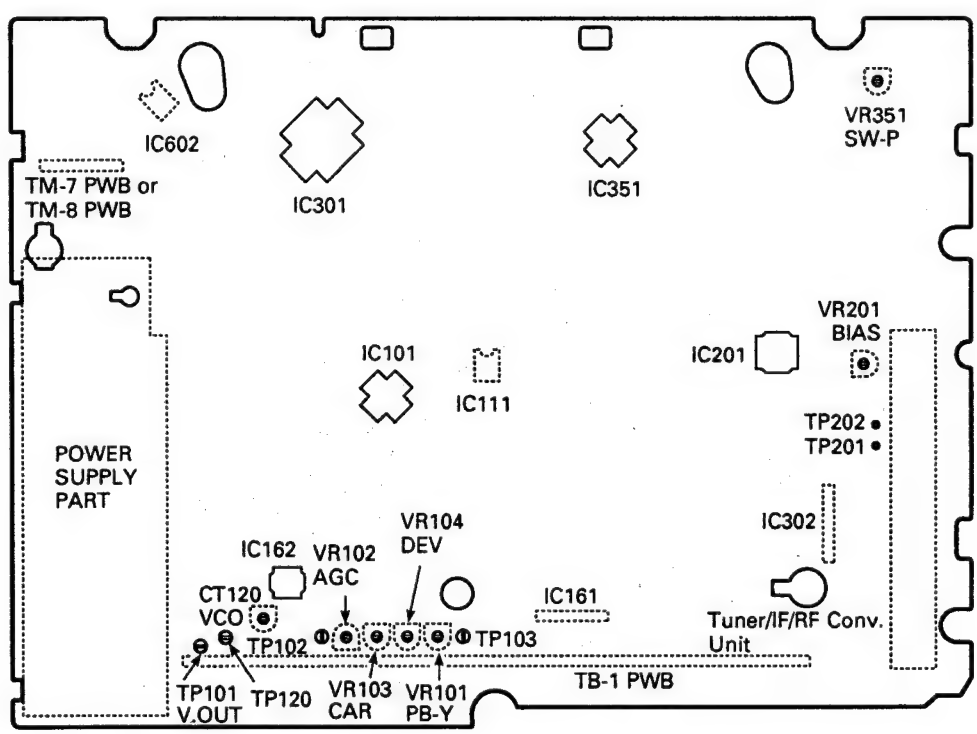
- These adjustments should be carried out upon completion of the tape transport adjustments.
- If the tape transport adjustments (except the tilt adjustment) are carried out after these adjustments, follow the procedures again in Section 2-1-3. SWITCHING POSITION ADJ.
- When a cassette tape is loaded, auto-tracking will be set immediately after starting the first playback. As this will deviate the tracking center set, be sure to press the channel buttons (△) or (▽) once directly after starting playback to prevent auto-tracking from being set.

2-1-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Oscilloscope	Vertical sensitivity: 5 mV/DIV, external trigger Band width: more than 10 MHz
Alignment Tape	VHJ-0009 or VHJ-0023: SP mode, monoscope, 6 KHz
Blank Tape	VHS-type cassette tape
Monitor TV	

2-1-2. LOCATION OF ADJUSTMENT POINTS

P1B24300B-S1/2



CP-1 PWB (FOIL SIDE)

Fig. 2.1.1

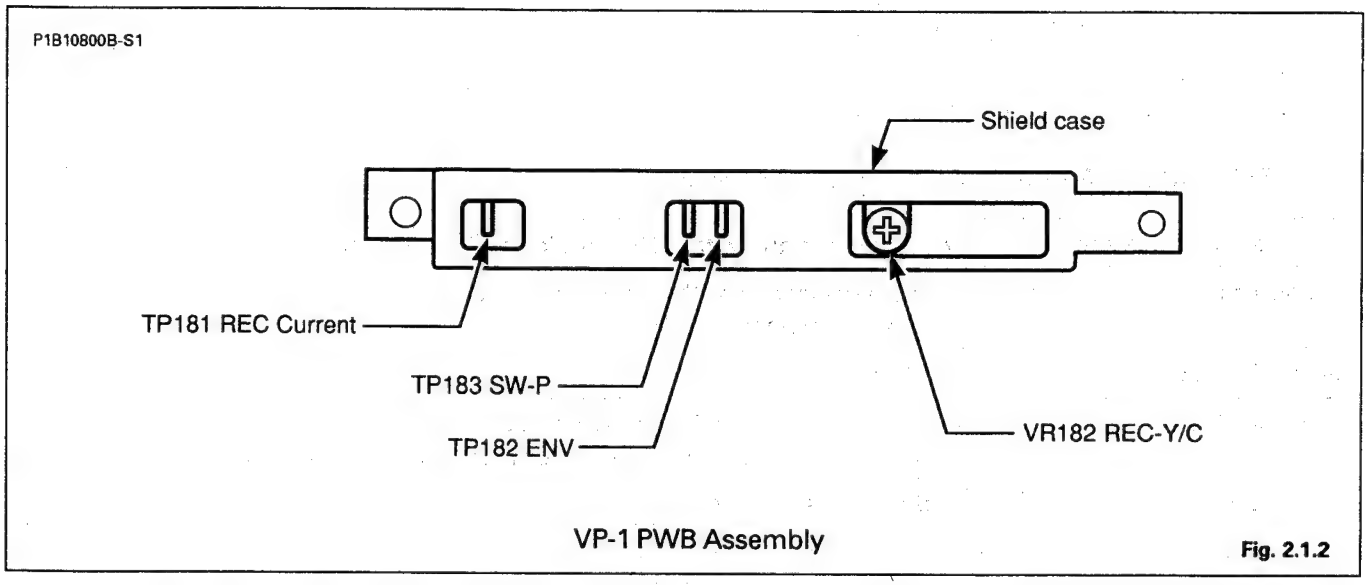


Fig. 2.1.2

Note:

- Self-recording means "Record any broadcasting or video signal and play back the just-recorded portion".

2-1-3. SWITCHING POSITION ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101 (VIDEO OUT) TP183 (SW-P)	Oscilloscope	PLAY mode Alignment tape (VHJ-0009 or VHJ-0023)

ADJ. Location	ADJ. Value
VR351 (SW-P)	6.5 H ± 0.5 H

1. Set the tracking control position to the center by pressing CHANNEL buttons (△) and (▽) simultaneously. (Tracking center position is displayed on the indicator panel as shown "T –:– ")
2. Adjust VR351 (SW-P) so that the width "T" becomes **6.5 H ± 0.5 H** as shown in Fig. 2.1.3.

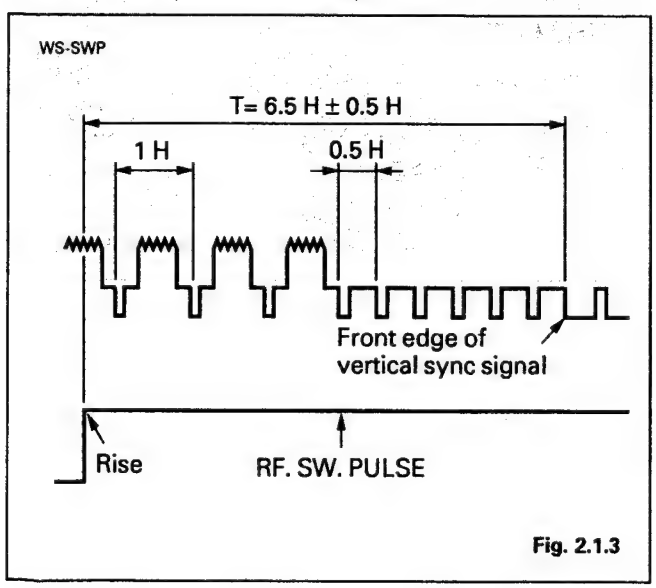


Fig. 2.1.3

2-1-4. STILL V-LOCK ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
Picture of monitor TV	Color bar generator or Broadcasting Monitor	Self-recording (SP mode) STILL mode Blank tape

ADJ. Location	ADJ. Value
CHANNEL (△) button CHANNEL (▽) button	The minimum vertical shake

1. Play back the just-recorded portion and then set the VCR in the STILL mode.
2. Press the CHANNEL (△) button or the CHANNEL (▽) button so that any vertical shake of the picture is brought to its minimum.

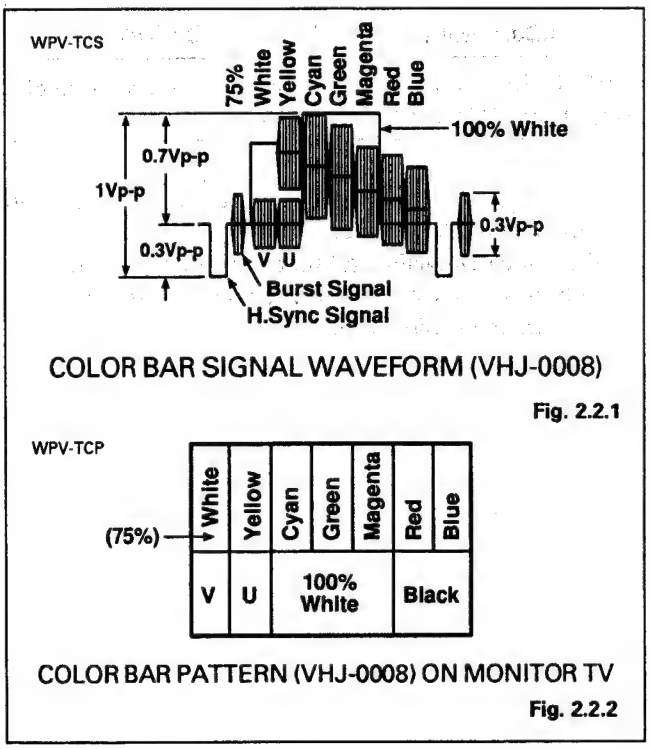
2-2. VIDEO CIRCUIT ADJUSTMENT

- Before making the following adjustments, Section 2-1. SERVO CIRCUIT ADJUSTMENT should be completed.
- Use the relay jig to provide simple adjustment of the VP-1 PWB assembly.

2-2-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Color Bar Signal Generator	PAL Color bar signel with 100% white level (EBU color bar signel)
Oscilloscope	Vertical sensitivity: 5 mV/DIV, external trigger Band width: more than 10 MHz
Digital Voltmeter	DC range
Alignment Tape	VHJ-0008 or VHJ-0023: SP mode, color bar, 1 kHz (Color bar signal waveform is described below. Refer to Fig. 2.2.1)
Blank Tape	VHS-type cassette tape
Oscilloscope Probe	Input capacity: less than 25 pF (10:1) less than 40 pF (1:1) Covering frequency: DC ~ 40 MHz (10:1) DC ~ 30 MHz (1:1)
Frequency Counter	8 significant digits
Adjustment Relay Jig	VHJ-0065: 5-wire flat cable for VP-1 PWB Assembly

ALIGNMENT TAPE COLOR BAR SIGNAL



COLOR BAR SIGNAL WAVEFORM (VHJ-0008)

Fig. 2.2.1

COLOR BAR PATTERN (VHJ-0008) ON MONITOR TV

Fig. 2.2.2

2-2-2. ADJUSTMENT RELAY JIG

Connect the flat cable end from the cylinder assembly to the VP-1 PWB assembly using the relay jig to provide simple repairing and adjustment of the VP-1 PWB assembly, as shown in Fig. 2.2.3. Further, when adjusting the VP-1 PWB assembly, be sure to make contact an end of shield case with bracket of the VP-1 PWB assembly to maintain the shield effect. If the VP-1 PWB assembly does not contact, there is insufficient ground and no proper play back image can be obtained.

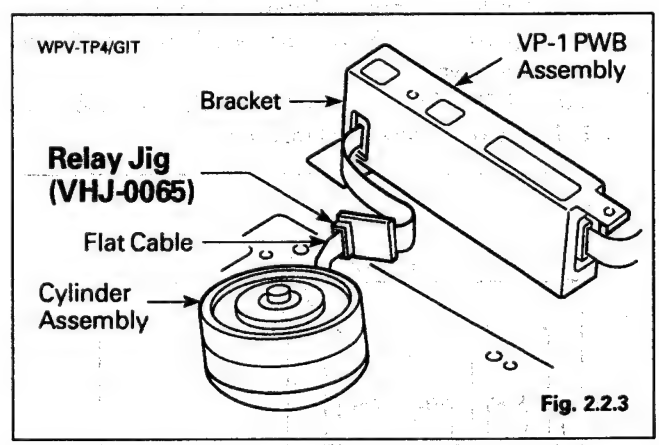
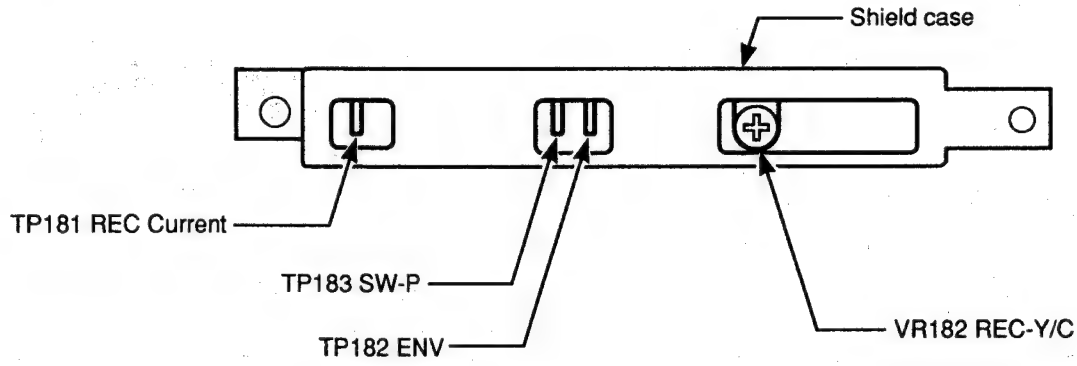


Fig. 2.2.3

2-2-3. LOCATION OF ADJUSTMENT POINTS

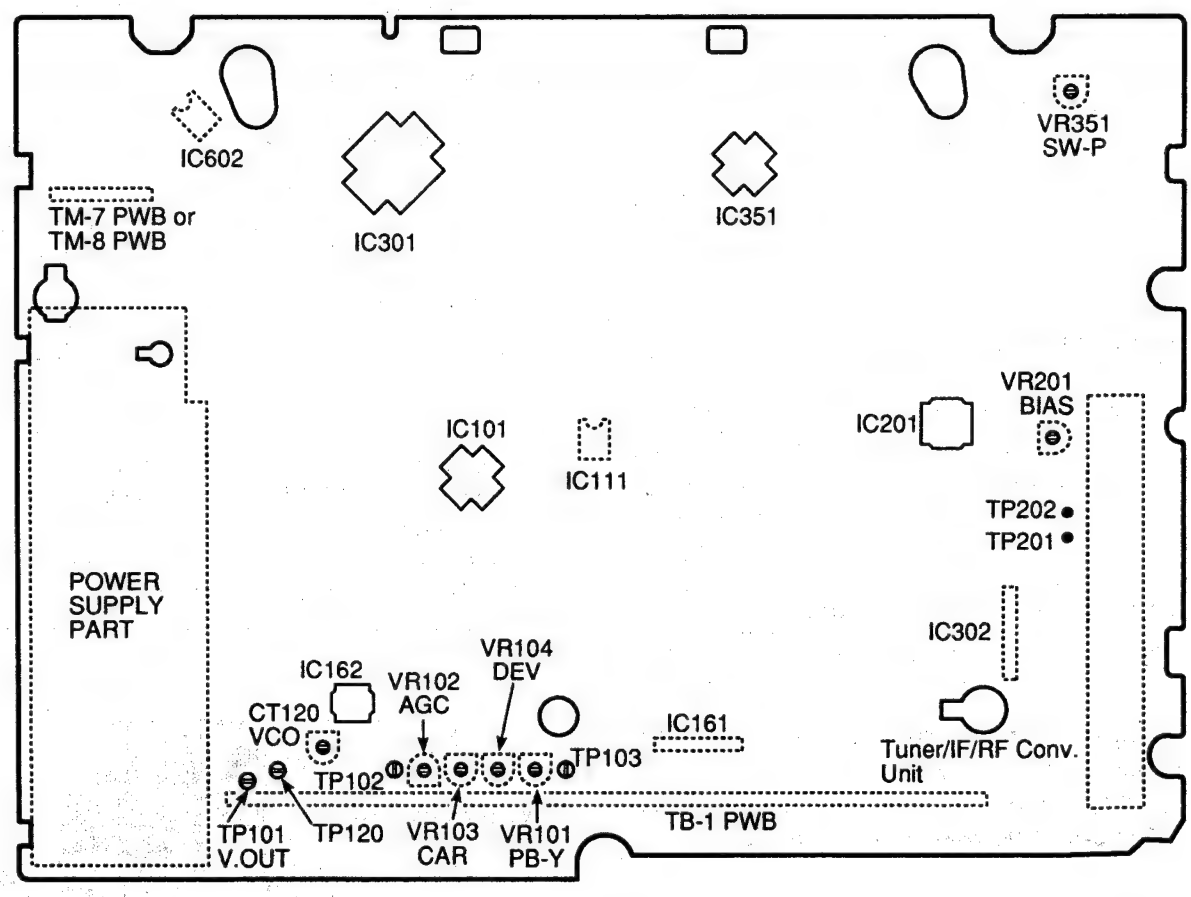
P1B10800B-V1



VP-1 PWB Assembly

Fig. 2.2.4

P1B24300B-V1/2



CP-1 PWB (FOIL SIDE)

Fig. 2.2.5

Notes:

- Self-recording means "Record the video signal and play back the just-recorded portion" (EURO-AV1 pin 19).
- Connect the monitor TV to the VIDEO OUTPUT terminal, before making following adjustments.
- ASO HIGH button to the OFF position.

2-2-4. AGC LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP102	Color bar generator Oscilloscope (10:1 probe)	E-E mode

ADJ. Location	ADJ. Value
VR102 (AGC)	0.43 Vp-p ± 0.01 Vp-p

1. Connect the color bar generator to the VIDEO INPUT terminal (EURO-AV1 pin 20).
2. Adjust VR102 (AGC) for **0.43 Vp-p ± 0.01 Vp-p** as shown in Fig. 2.2.6.

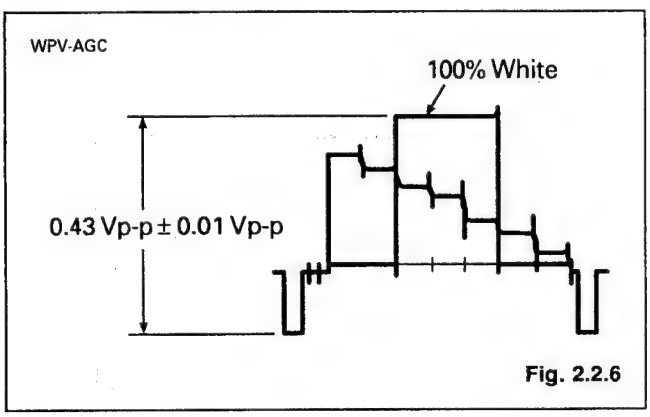


Fig. 2.2.6

2-2-5. PB-Y LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101	Oscilloscope (10:1 probe)	PLAY(SP) mode Alignment tape (VHJ-0008 or VHJ-0023)

ADJ. Location	ADJ. Value
VR101 (PB-Y)	1 Vp-p ± 0.05 Vp-p

1. Terminate the VIDEO OUTPUT terminal (EURO-AV1 pin 19) with a 75Ω resistor.
2. Adjust VR101 (PB-Y) for the video luminance signal level of **1 Vp-p ± 0.05 Vp-p**. (Refer to Fig. 2.2.7)

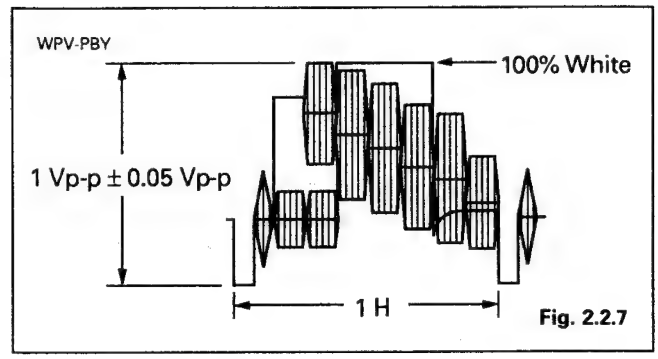


Fig. 2.2.7

2-2-6. CARRIER SET ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP103	Color bar generator Frequency counter	REC (SP) mode

ADJ. Location	ADJ. Value
VR103 (CAR)	3.83 MHz ± 0.05 MHz

1. Connect the color bar generator to the VIDEO INPUT terminal (EURO-AV1 pin 20).
2. After removing the first color bar signal input from the video input terminal, immediately adjust VR103 (CAR) so that the frequency becomes **3.83 MHz ± 0.05 MHz**.

2-2-7. DEVIATION ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101	Color bar generator Oscilloscope (10:1 probe)	Self-recording (SP) mode Blank tape

ADJ. Location	ADJ. Value
VR104 (DEV)	1 Vp-p ± 0.05 Vp-p

1. Record the color bar signal on the blank tape.
2. Play back of the just-recorded portion.
3. Adjust VR104 (DEV) for **1 Vp-p ± 0.05 Vp-p** as shown in Fig. 2.2.8.
4. If the adjustment value is not satisfactory, adjust VR 104 (DEV) and repeat steps 2 to 3.

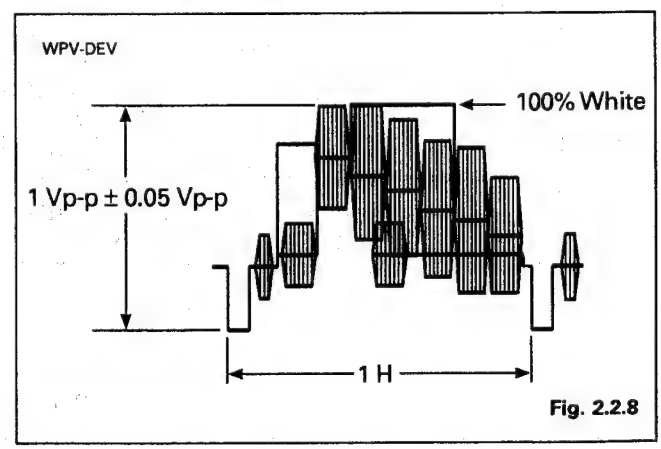


Fig. 2.2.8

2-2-8. Y/C REC CURRENT ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP181 (on VP-1 PWB)	Color bar generator Oscilloscope (1:1 probe)	REC (SP) mode Blank tape

ADJ. Location	ADJ. Value
VR182 (REC-Y/C)	For VCR 3715 series: 650 mVp-p ± 20 mVp-p For VCR 3725 series: 550 mVp-p ± 20 mVp-p

1. Connect the ground of the oscilloscope to the shield case of the VP-1 PWB assembly.
2. Adjust VR182 (REC-Y/C) so that the video luminance signal level at the sync tip is **VCR 3715 series: 650 mV p-p ± 20 mVp-p, VCR 3725 series: 550 mVp-p ± 20 mV p-p.** (Refer to Fig. 2.2.9)

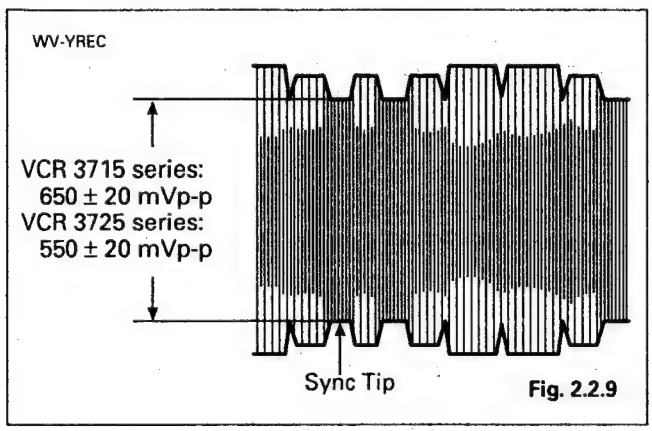


Fig. 2.2.9

2-2-9. VCO (on screen assist) ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP120	Color bar generator Digital voltmeter	E-E mode

ADJ. Location	ADJ. Value
CT120 (VCO)	2.5 V ± 0.3 V

1. Connect the digital voltmeter (DC range) to TP120 and GND.
2. Adjust CT120 (VCO) so that the voltage is **2.5 V ± 0.3 V.**

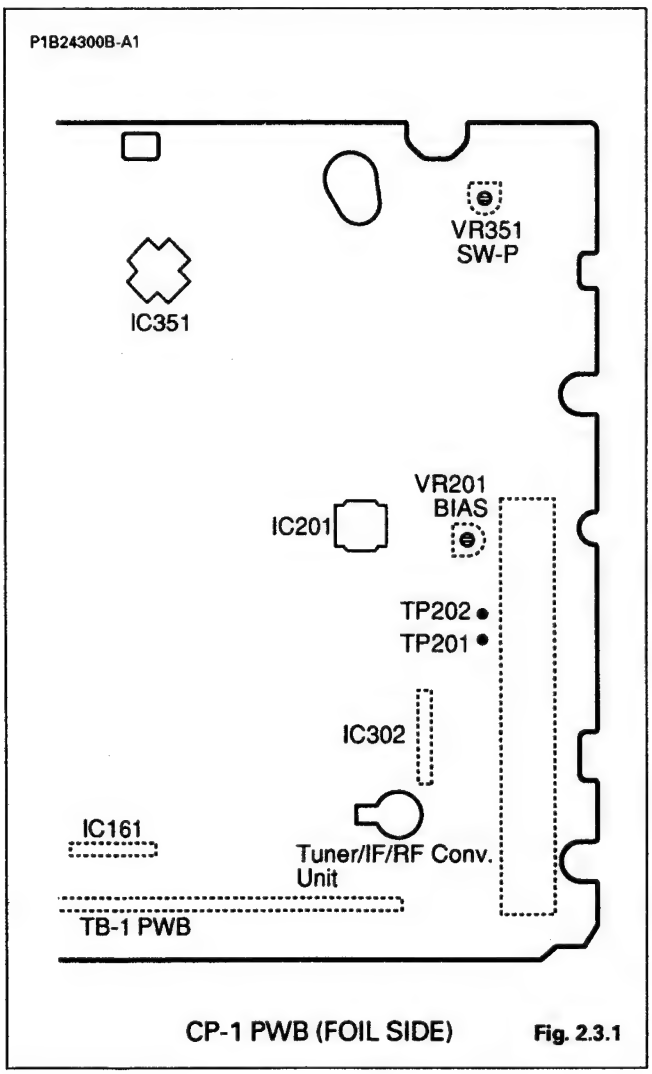
2-3. AUDIO CIRCUIT ADJUSTMENT

- Before making these adjustments, (especially, the tape guide height and audio control erase head height adjustments) should be carried out, so that the tape traveling between the loading guide pole and the audio control erase head runs without fluttering, twisting, curling.
- Before making these adjustments, Section 2-1. SERVO and Section 2-2. VIDEO circuit adjustments should be carried out.

2-3-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Oscilloscope	Vertical sensitivity : 10 mV/DIV Band width : more than 30 MHz
AC Voltmeter	Effective value indication Input frequency : 10 Hz ~ 20 kHz Input Impedance : more than 1 MΩ Measurement level : 1 mV (full scale)
Blank Tape	VHS-type cassette tape

2-3-2. LOCATION OF ADJUSTMENT POINTS



CP-1 PWB (FOIL SIDE) **Fig. 2.3.1**

2-3-3. BIAS LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP201 (HOT) TP202 (GND)	Oscilloscope AC voltmeter	REC mode Blank tape

ADJ. Location	ADJ. Value
VR201 (BIAS)	26 mVrms

1. Load the VCR with a blank tape and select the record mode without all incoming signal.
2. After confirming on the oscilloscope that a 70 kHz ± 5 kHz sine wave is being output, adjust VR201 (BIAS) so that the AC voltmeter's reading is **26 mVrms**.

2-4. TUNER AND IF CIRCUITS ADJUSTMENT

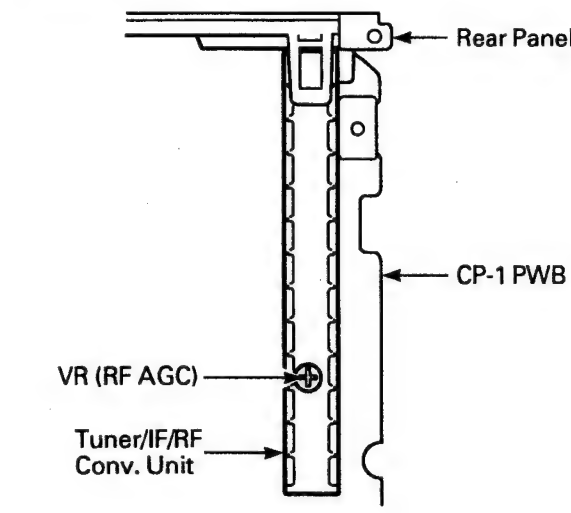
- When any malfunction occurs in the TUNER circuit the whole unit must be replaced.
- An adjustment of the IF circuit is shown as follows.

Note: The TUNER unit does not need any adjustments, because precise adjustments have been performed before shipment.

2-4-1. TEST EQUIPMENT AND STANDARD REQUIRED

Monitor TV	

2-4-2. LOCATION OF ADJUSTMENT POINT



IF UNIT(PARTS SIDE) Fig. 2.4.1

2-4-3. RF AGC ADJ.

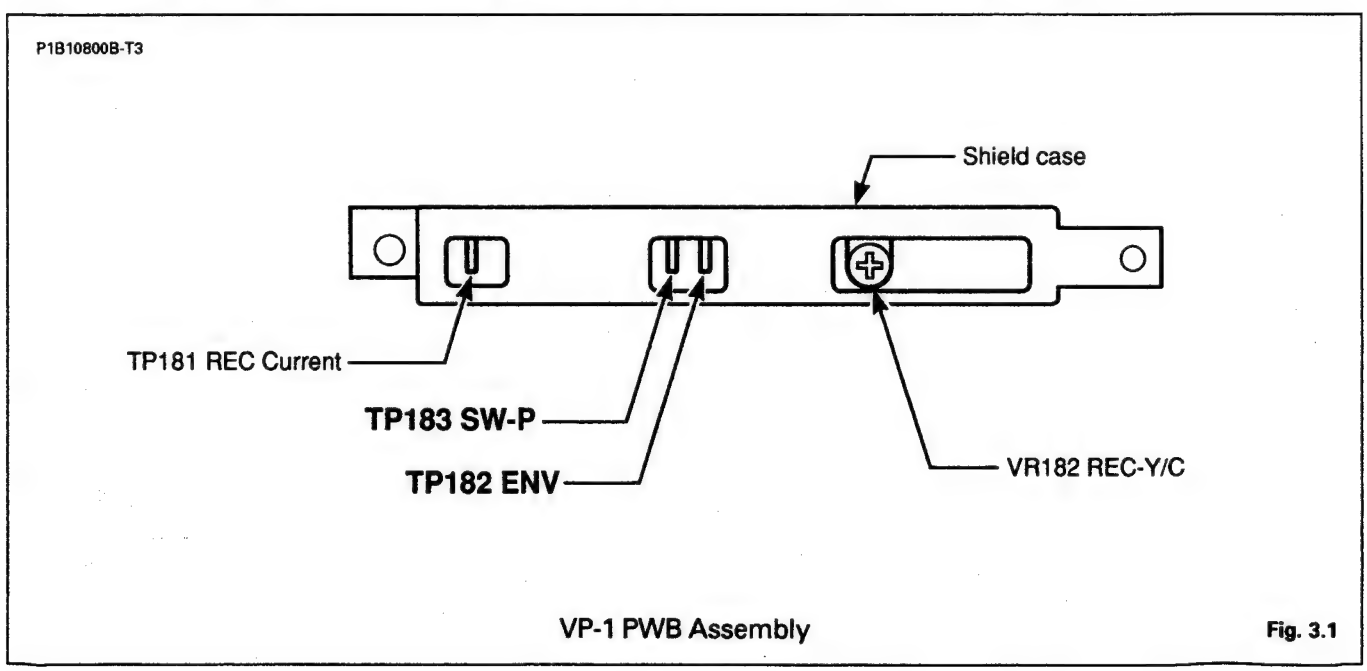
Measuring Point	Measuring Equipment	ADJ. Condition
Picture of monitor TV	Monitor TV	E-E mode

ADJ. Location	ADJ. Value
VR (RF AGC) (on the IF circuit)	S/N is best point

1. Connect the monitor TV to VHF/UHF ANTENNA OUTPUT terminal.
2. Connect the VHF antenna to VHF/UHF ANTENNA INPUT terminal.
3. Receive the middle electrical field (70 dBμ ~ 90 dBμ) of the VHF high channel, and slowly turn VR (RF AGC) from the point where snow-noise is present to the point where it just disappears from the monitor TV.
4. Confirm by monitor TV that there is no beat and saturation (S/N is best point) when receiving any TV channel.

3. TEST POINT FOR TAPE PATH ADJUSTMENT

Test point TP182 (ENV) and TP183 (SW-P) for tape path adjustment is shown in Figure below.
For adjustment, refer to the separate volume "Mechanical adjustments 6611 77 06 and 6611 90 10."



VP-1 PWB Assembly Fig. 3.1

4. PARTS LIST

ACCESSORIES

LOCATION		PARTS NO.	DESCRIPTION
		5652 2307	REMOCON(WITH COVER BATTERY) (VCR 3725IR,3725UK)
OR		5652 2315	REMOCON,RC314(WITH COVER BATTERY) (VCR 3715BN,3715CE,3715NE,3715SE)
		6134 5345	COVER BATTERY(FOR REMOCON)
		6612 7422	INSTRUCTION MANUAL(VCR 3715SE ONLY)
OR		6612 7420	INSTRUCTION MANUAL(VCR 3715CE ONLY)
OR		6612 7421	INSTRUCTION MANUAL(VCR 3715NE ONLY)
OR		6612 7425	INSTRUCTION MANUAL(VCR 3725IR ONLY)
OR		6612 7424	INSTRUCTION MANUAL(VCR 3725UK ONLY)
OR		6612 7441	INSTRUCTION MANUAL(VCR 3715BN ONLY)
		4131 4221	CABLE,ANT(VCR 3715BN,3715NE,3715SE)
OR		4131 4286	CABLE,ANT(EXCEPT VCR 3715CE)
OR		4131 4198	CABLE,ANT(VCR 3715CE ONLY)
OR			CABLE,ANT(VCR 3715CE ONLY)
OR		4131 4203	CORD(VCR 3715BN,3715NE,3715SE)
OR			CORD(EXCEPT VCR 3715CE)
	⚠	4131 8829	CORD,POWER (VCR 3715BN,3715CE,3715NE,3715SE)
OR	⚠		CORD,POWER (VCR 3715BN,3715CE,3715NE,3715SE)
OR	⚠		CORD,POWER (VCR 3715BN,3715CE,3715NE,3715SE)
OR	⚠		CORD,POWER (VCR 3715BN,3715CE,3715NE,3715SE)
OR	⚠	4131 4287	CORD,POWER(VCR 3725IR,3725UK)
OR	⚠	4131 4287	CORD,POWER(VCR 3725IR,3725UK)

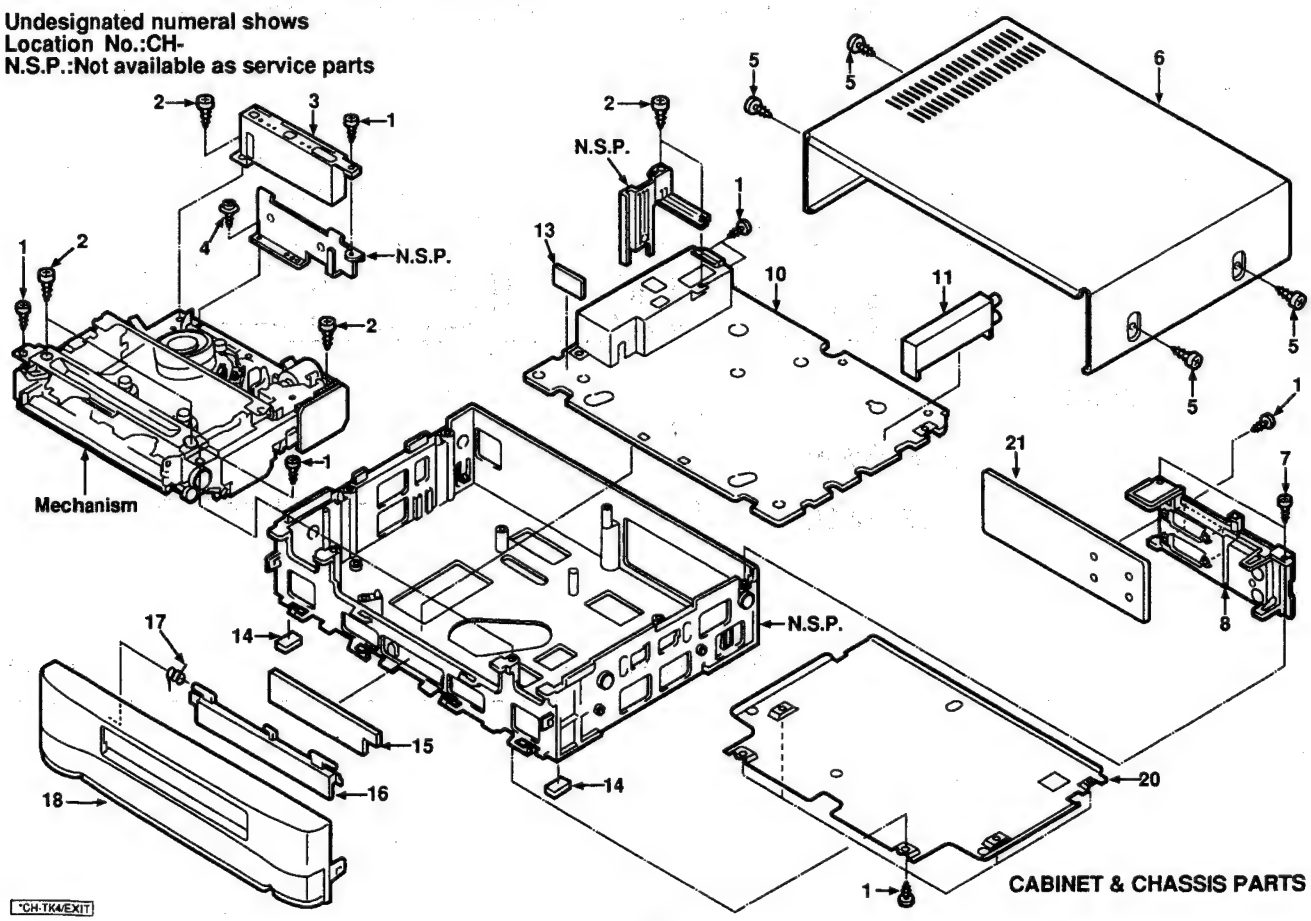
PACKING MATERIALS

LOCATION	PARTS NO.	DESCRIPTION
	6162 8916	CARTON CASE(VCR 3715SE ONLY)
OR	6162 8915	CARTON CASE(VCR 3715CE ONLY)
OR	6162 8921	CARTON CASE(VCR 3715NE ONLY)
OR	6162 8922	CARTON CASE(VCR 3725IR ONLY)
OR	6162 8923	CARTON CASE(VCR 3725UK ONLY)
OR	6162 8924	CARTON CASE(VCR 3715BN ONLY)
	6172 3091	CUSHION,FRONT (VCR 3715BN,3715CE,3715NE,3715SE)
	6172 3094	CUSHION,FRONT(VCR 3725IR,3725UK)
	6172 3092	CUSHION,BACK (VCR 3715BN,3715CE,3715NE,3715SE)
OR	6172 3095	CUSHION,BACK(VCR 3725IR,3725UK)
		POLYE COVER,INNER-K

CABINET & CHASSIS PARTS

LOCATION	PARTS NO.	DESCRIPTION
CH-1		SCR L-TPG BIN 3X10
CH-2		SCR S-TPG BIN 4X12
CH-3	6913 4639	COMPL PWB,VP-1
CH-4		SCR PAN+FLG 3X6
CH-5		SPECIAL SCREW
CH-6	6135 5178	COMPL,COVER TOP(VCR 3725UK ONLY)
OR	6135 5175	COVER TOP(EXCEPT VCR 3725UK)
CH-7		SCR S-TPG BIN 3X10
CH-8	8681 5363	TERMINAL
CH-10	6913 4640	COMPL PWB,CP-1-A (VCR 3715BN,3715NE,3715SE)
OR	6913 4651	COMPL PWB,CP-1-A(VCR 3715CE ONLY)
OR	6913 4658	COMPL PWB,CP-1-A(VCR 3725IR ONLY)
OR	6913 4659	COMPL PWB,CP-1-A(VCR 3725UK ONLY)
CH-11	5823 0614	TUNER,RF/TU/IF (VCR 3715BN,3715CE,3715NE,3715SE)
OR	5823 0616	TUNER,RF/TU/IF(VCR 3725IR ONLY)
OR	5823 0615	TUNER,RF/TU/IF(VCR 3725UK ONLY)
CH-13	6913 0957	COMPL PCB,TM-8(VCR 3715CE ONLY)
OR	6913 4634	COMPL PWB,TM-7(VCR 3715BN ONLY)
CH-14	6273 4052	STAND,FELT,FRONT
CH-15	6913 4631	COMPL PWB,TM-1
CH-16	6134 5346	DOOR CASSETTE
CH-17	7358 4829	SPRING
CH-18	6418 3470	ASSY,CABINET FRONT (VCR 3715BN,3715CE,3715NE,3715SE)
OR	6418 3475	ASSY,CABINET FRONT (VCR 3725IR,3725UK)
CH-20	6135 5174	COVER BOTTOM
CH-21	6913 4632	COMPL PWB,TB-1

Undesignated numeral shows Location No.:CH-
N.S.P.:Not available as service parts

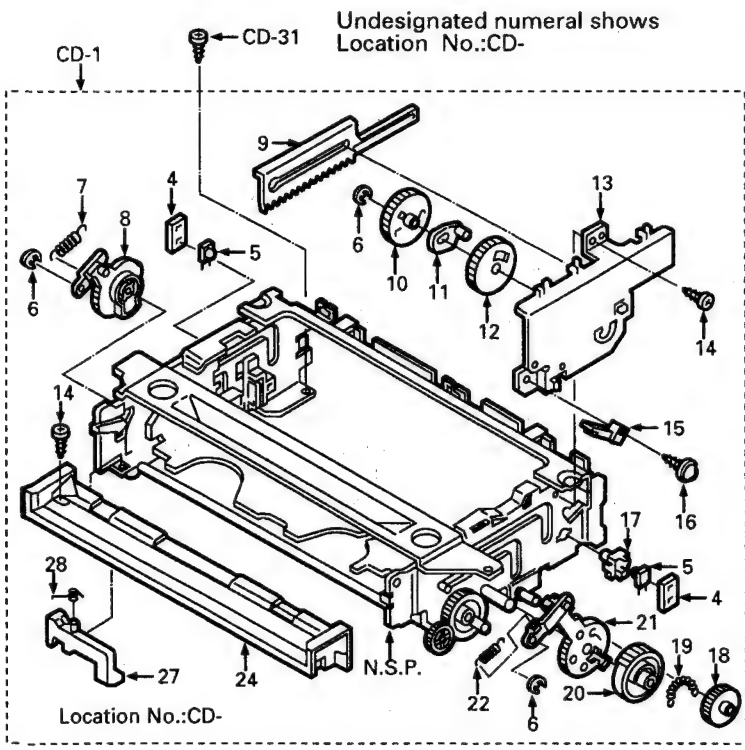


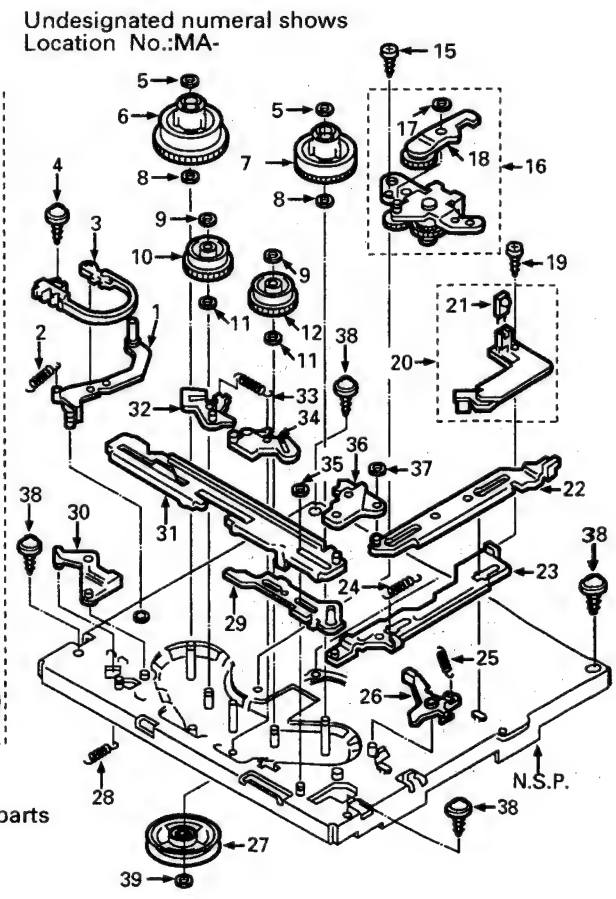
MECHANISM PARTS

CB602700
M80045ZZ

LOCATION	PARTS NO.	DESCRIPTION
MECHANISM PARTS 1		
CD-1	8318 6017	COMPL,CASSETTE MECHA
CD-4	8681 4250	LID
CD-5	3656 3089	PHOTO COUPLE PN150SAN
CD-6		RING E 2.3
CD-7	7358 4341	SPRING,LINK L
CD-8	7525 1181	ASSY,GEAR,LEVER L
CD-9	8318 5316	RACK
CD-10	7525 1399	GEAR,LOCK
CD-11	8681 5276	ASSY,LEVER,PINION
CD-12	7525 1183	GEAR,PINION
CD-13	8681 4097	ASSY,BRACKET,GEAR
CD-14		SCR S-TPG BIN 2.6X4
CD-15	4112 7484	SW,SPECIAL
CD-16		SCR PAN+SW+W 2X9
CD-17	8681 4816	HOLDER,TRANSISTOR
CD-18	7525 1184	GEAR,IDLER
CD-19	7358 4363	SPRING,GEAR MAIN
CD-20	7525 1185	GEAR,MAIN
CD-21	7525 1186	ASSY,GEAR,LEVER R
CD-22	7358 4342	SPRING,LINK R
CD-24		BOARD,UNDER
CD-27	8318 5860	LEVER,SAFETY SW
CD-28	7358 4713	SPRING,SAFETY SW
CD-31		SCR BIN 3X6
MA-1	8681 4388	ASSY,LEVER,TENSION
MA-2	7358 4390	SPRING,LEVER TENSION
MA-3	8681 4120	ASSY,HOLDER,BAND
MA-4		SCR PAN+SW+W 2.6X6
MA-5		WASHER Y 2.6X6X0.25
MA-6	6253 4244	ASSY,REEL,SUPPLY
OR	6253 4246	ASSY,REEL,SUPPLY
MA-7	6253 4245	ASSY,REEL,TAKE UP
OR	6253 4255	ASSY,REEL,TAKE UP

LOCATION	PARTS NO.	DESCRIPTION
MA-8	7726 0615	SPECIAL WASHER 3.1X6X0.3
OR	7726 0594	SPECIAL WASHER 3.1X6X0.4
OR	7726 0585	SPECIAL WASHER 3.1X6X0.5
MA-9	6158 2019	WASHER Y 2.1X5X0.25
OR		WASHER Y 2.1X6X0.25
MA-10	7525 1348	GEAR,REEL SUPPLY
OR	7525 1398	GEAR,REEL SUPPLY
MA-11	7726 0618	SPECIAL WASHER 2.6X6X0.25
MA-12	7525 1349	GEAR,REEL TAKE UP
OR	7525 1397	GEAR,REEL TAKE UP
MA-15		SPECIAL SCREW 2.6X4
MA-16	7548 4261	COMPL,IDLER,CLUTCH
MA-17		WASHER Y 2.1X4X0.25
MA-18	7548 4260	ASSY,IDLER
MA-19		SCR S-TPG BIN 2.6X8
MA-20	6913 1130	COMPL PCB,MC-4
MA-21	3681 1690	LED LN59
MA-22	8681 4121	ASSY,SLIDE,ACT PLATE
MA-23	8681 5262	SLIDE,C BRAKE
MA-24	7358 4345	SPRING,RETURN SLIDE
MA-25	7358 4346	SPRING,SUB T
MA-26	8681 4382	ASSY,BRAKE SUB T
MA-27	7548 4226	PULLEY,REEL
MA-28	7358 4347	SPRING,SUB SUPPLY
MA-29	8681 4105	SLIDE,ACT BRAKE
MA-30	8681 4163	BRAKE,SUB SUPPLY
MA-31	8681 4107	ASSY,SLIDE,M PLATE
MA-32	8681 4108	ASSY,BRAKE,SUPPLY
MA-33	7358 4488	SPRING,MAIN BRAKE
MA-34	8681 4109	ASSY,BRAKE,TAKE UP
MA-35		WASHER Y 2.6X5X0.5
MA-36	8681 4110	LEVER,CONT PLATE
MA-37	7726 0611	SPECIAL WASHER
MA-38		SCR S-TPG BIN 4X12
MA-39		SPECIAL WASHER 2.4X6X0.25





N.S.P.:Not available as service parts

S2EP1/MA-1

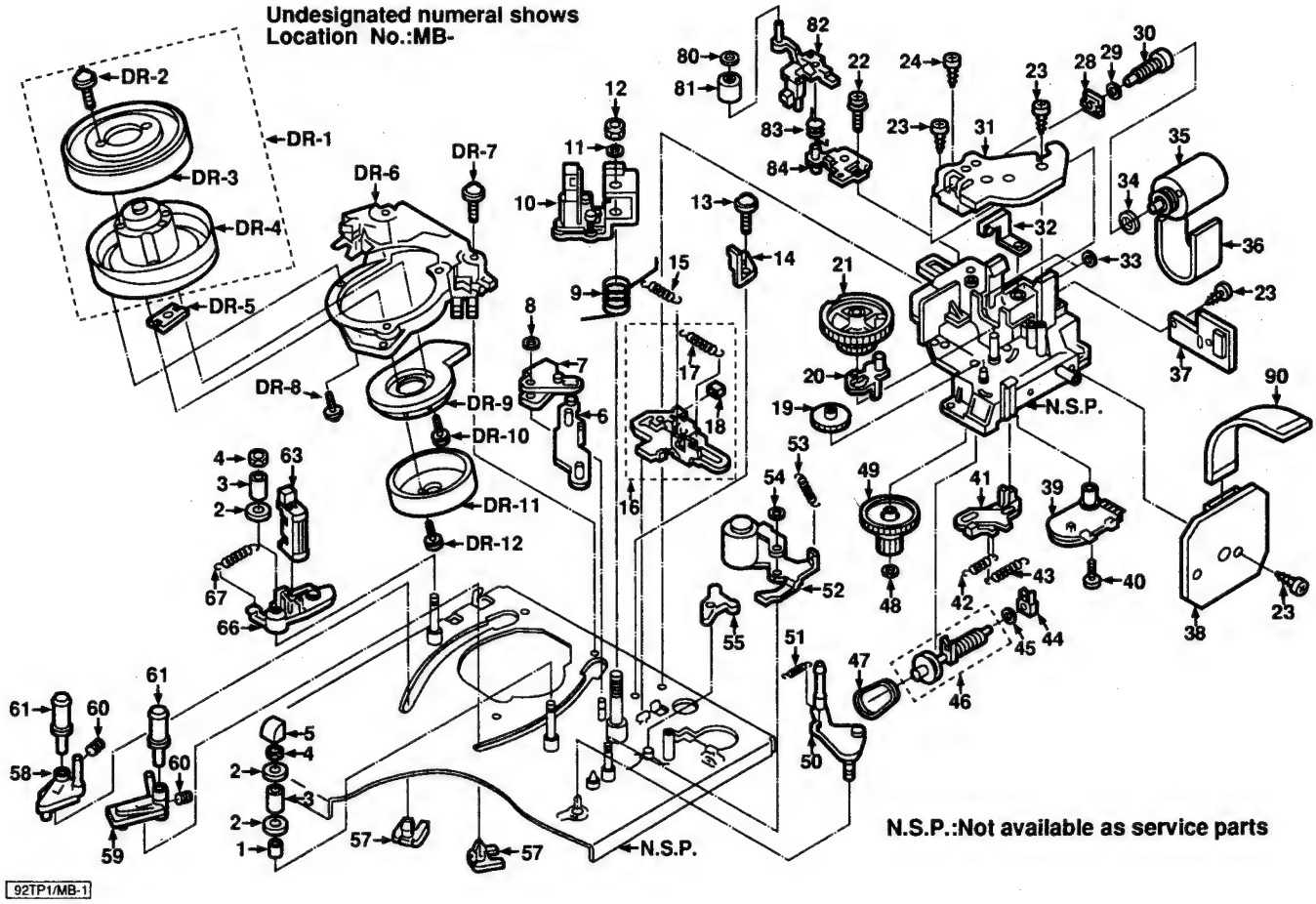
MECHANISM PARTS 2

LOCATION	PARTS NO.	DESCRIPTION
DR-1		COMPL,CYLINDER,2NP-L(VCR 3725IR, 3725UK)
OR		COMPL,CYLINDER,2N2S-V(VCR 3715BN ,3715CE,3715NE,3715SE)
DR-2		SCR PAN+W 3X8
DR-3	4335 9321	ASSY,CYLINDER,UPR 2N2P-L (VCR 3725IR,3725UK)
OR	4335 9413	ASSY,CYLINDER,UPR 2N2S-V(VCR 371 5BN,3715CE,3715NE,3715SE)
DR-4		ASSY,CYLINDER,LWR 2AL
OR	4335 9463	ASSY,CYLINDER,LWR 2AL
OR	4335 9308	ASSY,CYLINDER,LWR2
OR	4335 9360	ASSY,CYLINDER,LWR2
DR-5	8318 5783	SPACER,MOTOR 0.3T
DR-6		BASE,CYLINDER
OR	8681 4885	BASE,CYLINDER
DR-7		SCR PAN+FLG 3X6
DR-8		SCR PAN+FLG 2.6X8
OR		SPECIAL SCREW 2.6X8
DR-9	4335 9337	STATOR,MOTOR CYL
OR		STATOR,MOTOR CYL
DR-10		SCR PAN+SW 2.3X10
OR		SCR PAN+SW 2.3X8
OR		SPECIAL SCREW 2.3X10
DR-11	4335 9317	ROTOR,MOTOR CYL
DR-12		SCR PAN+SW 2.3X6
OR		SPECIAL SCREW 2.3X6
MB-1	8318 5862	SLEEVE
MB-2	7726 0622	SPECIAL WASHER
MB-3	8318 5863	TAPE GUIDE
MB-4		NUT HEX (3)
MB-5	8681 4881	CAP
MB-6	8681 5314	SLIDE,ACT PINCH
MB-7	8681 4113	ASSY,LEVER,CAM PINCH
MB-8	6158 2016	WASHER Y 3.1X8X0.5
MB-9	7358 4350	SPRING,ACE HEAD
MB-10	8681 5249	COMPL,BRACKET,HEAD
MB-11	7726 0653	SLEEVE,ACE HEAD
MB-12	7711 0176	SPECIAL NUT (M5)
MB-13		SCR PAN+SW+W 2.6X5
MB-14	8681 4817	BRACKET,STOPPER
MB-15	7358 4352	SPRING,SLIDE BRAKE
MB-16	8681 4927	COMPL,SLIDE,CAM
MB-17	7358 4351	SPRING,LINK LOCK
MB-18	7522 0219	DAMPER
MB-19	7525 1193	GEAR,FRONT LOAD
MB-20	8681 4384	ASSY,LEVER,FRONT
MB-21	7525 1347	GEAR,HELICAL FRONT
MB-22		SCR PAN+SW+W 2.6X6
MB-23		SCR S-TPG PAN 2.6X6
MB-24		SCR S-TPG BIN 2.6X8
OR		SCR S-TPG PAN 2.6X8
MB-28	8681 4127	HOLDER,WORM
MB-29		WASHER
MB-30	7525 1195	ASSY,WORM,FRONT
MB-31	8318 5722	BRACKET,HOLDER
MB-32	8318 5532	PLATE,NUT
MB-33	8868 0723	DAMPER,MOTOR
MB-34	8681 4123	DAMPER,WORM
MB-35	4432 8818	ASSY,LOADING MOTOR
MB-36	8868 0724	DAMPER,MOTOR
MB-37	6913 1082	COMPL PCB,MC-3
MB-38	6913 4650	COMPL PWB,MC-2
MB-39	4112 9866	ROTARY SWITCH
MB-40		SCR PAN 2.6X13
MB-41	8681 4385	ASSY,SLIDE,FRONT
MB-42	7358 4457	SPRING,LEVER LOAD
MB-43	7358 4458	SPRING,LEVER ACT
MB-44	8681 4386	HOLDER,WORM
OR	8681 4977	HOLDER,WORM
MB-45		WASHER 2.1X6X0.5
MB-46	7525 1264	ASSY,WORM,LOAD
MB-47	7618 4267	BELT,LOADING
MB-48		WASHER SLIT 2.6X5X0.50
MB-49	7525 1191	GEAR,HELICAL
MB-50	8681 4628	ASSY,LEVER,REV GUIDE
MB-51	7358 4356	SPRING,REVIEW LEVER
MB-52	7538 3373	COMPL,PINCH ROLLER
MB-53	7358 4830	SPRING,PINCH ROLLER
MB-54	6158 2015	WASHER Y 3.6X6X0.5
MB-55	8681 4128	COMPL,LEVER,ACT BRAKE
MB-57	8318 6040	PLATE,BGR
MB-58	8681 5264	ASSY,MOUNTING,ROLLER S
MB-59	8681 5265	ASSY,MOUNTING,ROLLER T
MB-60	6158 2020	SCR SET HEX-SCT 2X3
MB-61	8681 4132	ASSY,GUIDE,ROLLER
MB-63	4335 9466	HEAD,ERASE FULL
MB-66	8318 6072	LEVER,FE HEAD
MB-67	7358 4357	SPRING,ERASE HEAD
MB-80	6158 2018	WASHER Y 2.6X6X0.5
MB-81	8681 5364	ASSY,ROLLER,CLEANER
MB-82	8318 6013	ASSY,LEVER,CLEANER
MB-83	7358 4714	SPRING
MB-84	8681 5245	BRACKET,CLEANER
MB-90	4131 4333	FLEXIBLE FLAT CABLE CN811-CN303

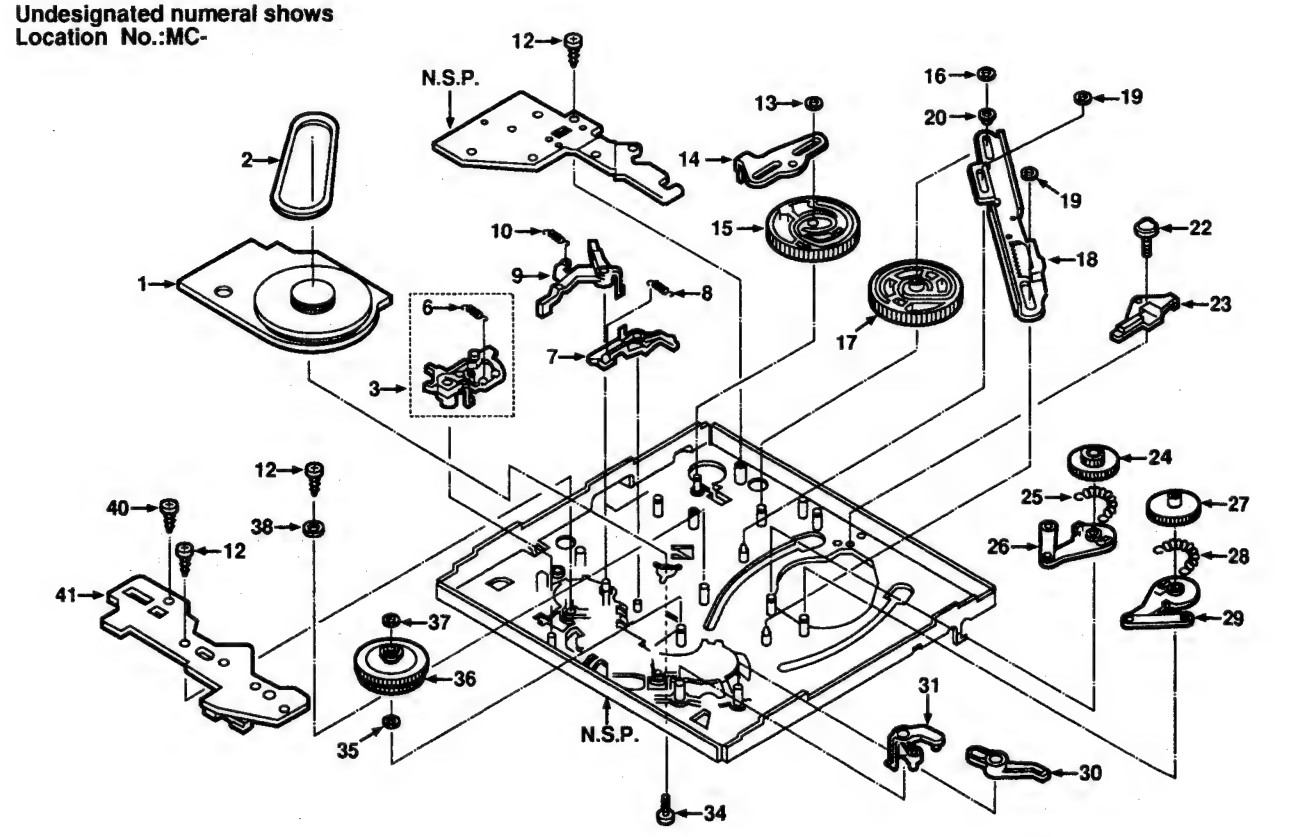
MECHANISM PARTS 3

MC-1	4432 9389	MOTOR,CAPSTAN DC 3W
MC-2	7618 4268	BELT,REEL DRIVE
MC-3	8681 4971	COMPL,LEVER,CLUTCH
MC-6	7358 4359	SPRING,LEVER CLUTCH
MC-7	8681 4136	LEVER,CHANGE CLUTCH
MC-8	7358 4360	SPRING,CHANGE CLUTCH
MC-9	8681 4167	ASSY,BRAKE,CAPSTAN
MC-10	7358 4453	SPRING,CAPSTAN
MC-12		SCR S-TPG BIN 2.6X8
MC-13	6158 2016	WASHER Y 3.1X8X0.5
MC-14	8681 5263	SLIDE,CAM PLATE
MC-15	7525 1196	CAM,MODE
MC-16	6158 2017	WASHER Y 3.1X6X0.5
MC-17	7525 1350	CAM,MAIN
MC-18	8681 4976	ASSY,RACK,LOAD
MC-19	6158 2018	WASHER Y 2.6X6X0.5
MC-20	7726 0654	SPACER,RACK LOAD
MC-22		SCR PAN+FLG 3X4
MC-23	7358 4365	ASSY,EARTH,CYL
MC-24	7525 1351	GEAR,LOAD TAKE UP
MC-25	7358 4361	SPRING,GEAR LOAD T
MC-26	8681 4141	ASSY,LEVER,LOAD T
MC-27	7525 1199	GEAR,LOAD S
MC-28	7358 4362	SPRING,GEAR LOAD S
MC-29	8681 4142	ASSY,LEVER,LOAD S
MC-30	8681 4143	LEVER,RETURN TENSION
MC-31	8681 4387	ASSY,LEVER CONTROL
MC-34		SCR S-TPG PAN 2.6X6
MC-35	7726 0621	SPECIAL WASHER 3.1X6X0.25
MC-36	7525 1396	ASSY,GEAR,FRICTION
MC-37		SPECIAL WASHER 2.4X6X0.25
MC-38		WASHER Z 2.6X10X0.5
MC-40		SCR S-TPG BIN 2.6X5
MC-41	6913 1133	COMPL,MC-1

EXPLODED VIEW OF MECHANISM PARTS 2



EXPLODED VIEW OF MECHANISM PARTS 3



ELECTRICAL PARTS

NOTE-2

NOTE;

1. Materials of Capacitors and Resistors are abbreviated as follows;
   Resistors
   - MT-FILM ..... Metallized Film Resistor
   - MT-GLAZE ..... Metallized Glaze Reistor
   - OXIDE-MT ..... Oxide Metallized film Resistor

   Capacitors
   - MT-POLYEST ..... Metallized Polyester capacitor
   - MT-COMPO ..... Metallized Composite capacitor
   - TA-SOLID ..... Tantalum Solid Capacitor
   - AL-SOLID ..... Aluminium Solid Capacitor
   - NP-ELECT ..... Non-Polarized Electrolytic Capacitor
   - OS-SOLID ..... Aluminium Solid Capacitors with Organic Semiconductive Electrolytic Capacitor
   - DL-ELECT ..... Double Layered Electrolytic Capacitor
2. Tolerance of Capacitor (10pF over) and Resistor are noted with follow symbols.
   F ..... ± 1% G ..... ± 2% J ..... ± 5% K ..... ± 10%
   M ..... ± 20% N ..... ± 30% Z ..... ± 80% ~ −20%
3. Capacitors
   U: μH P: pF
4. Inductors
   UH: μH MH: mH
5. N.S.P.; Not available as service parts.

COMPL PWB,CP-1-A

COMPLNO.6913 4640 (VCR 3715BN,3715NE,3715SE)
COMPLNO.6913 4651 (VCR 3715CE ONLY)
COMPLNO.6913 4658 (VCR 3725IR ONLY)
COMPLNO.6913 4659 (VCR 3725UK ONLY)

(SEMICONDUCTORS)

LOCATION	PARTS NO.	DESCRIPTION
Q1002	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1003	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q1004	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q1006	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1011	3614 4377	TR DTC144EL
OR		TR UN6213
Q1012	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1151	3614 4620	TR DTC124EL
OR		TR UN6212
Q1152	3614 8821	TR DTA114EL
OR		TR UN6111
Q1301	3614 4402	TR DTA144EL(VCR 3725IR,3725UK)
OR		TR UN6113(VCR 3725IR,3725UK)
Q1601	3614 5281	TR 2SA608-F-SPA
OR	3614 5540	TR 2SA933S-R
Q1621	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-Q
OR	3614 5240	TR 2SC1740S-R
OR	3614 4947	TR 2SC536-E-SPA
OR	3614 3969	TR 2SC536-F-SPA
Q1622	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1623	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q1651	3614 4377	TR DTC144EL
OR		TR UN6213
Q1652	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1653	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q1654	3614 4614	TR 2SA1561-Q
OR	3614 4492	TR 2SA1561-R
OR		TR 2SB1320A-Q
OR		TR 2SB1320A-R
Q2001	3614 7705	TR 2SC3331-S
OR		TR 2SC3331-T
OR	3614 4650	TR 2SC3331-U
Q2002	3614 4377	TR DTC144EL
OR		TR UN6213
Q2003	3614 7730	TR DTA124ES
OR	3614 4307	TR 2SA1346
Q3503	3614 4377	TR DTC144EL(VCR 3725IR,3725UK)
OR		TR UN6213(VCR 3725IR,3725UK)
Q3504	3614 4377	TR DTC144EL
OR		TR UN6213
Q3553	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q5001	3614 7812	TR 2SK1460
OR		TR 2SK1460LS
Q5002	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5003	3614 4543	TR 2SA984-F
Q5004	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5101	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5102	3614 5513	TR 2SC2274-F
OR		TR 2SC2274K-F
Q5103	3614 4494	TR DTA144ES
OR	3614 5280	TR 2SA1345
Q5104	3614 5227	TR DTC144ES
OR	3614 5279	TR 2SC3399
Q6001		TR 2SK1104-P(VCR 3725IR,3725UK)
OR		TR 2SK1104-Q(VCR 3725IR,3725UK)
OR		TR 2SK1104-R(VCR 3725IR,3725UK)
OR	3614 7523	TR 2SK222-D(VCR 3725IR,3725UK)
OR		TR 2SK222-E(VCR 3725IR,3725UK)
OR	3614 7748	TR 2SK772-E(VCR 3725IR,3725UK)
OR		TR 2SK772-F(VCR 3725IR,3725UK)
Q6002	3614 5227	TR DTC144ES(VCR 3725IR,3725UK)
OR	3614 5279	TR 2SC3399(VCR 3725IR,3725UK)
Q6051	3614 4690	TR KSA1175-Y
OR	3614 4942	TR 2SA608-E-SPA
OR	3614 5281	TR 2SA608-F-SPA
OR	3614 4542	TR 2SA933S-Q
OR	3614 5540	TR 2SA933S-R

LOCATION	PARTS NO.	DESCRIPTION
Q6052	3614 4379	TR 2SC4038-Q
OR	3614 4378	TR 2SC4038-R
OR		TR 2SD1991A-Q
OR		TR 2SD1991A-R
Q6901	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-Q
OR	3614 5240	TR 2SC1740S-R
OR	3614 4947	TR 2SC536-E-SPA
OR	3614 3969	TR 2SC536-F-SPA
Q6902	3614 4690	TR KSA1175-Y
OR	3614 4942	TR 2SA608-E-SPA
OR	3614 5281	TR 2SA608-F-SPA
OR	3614 4542	TR 2SA933S-Q
OR	3614 5540	TR 2SA933S-R
Q6903	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-Q
OR	3614 5240	TR 2SC1740S-R
OR	3614 4947	TR 2SC536-E-SPA
OR	3614 3969	TR 2SC536-F-SPA
Q6904	3614 5227	TR DTC144ES
OR	3614 5279	TR 2SC3399
Q6921	3614 4546	TR 2SC2960-F-SPA(VCR 3725IR,3725UK)
OR	3614 4547	TR 2SC2960-G-SPA(VCR 3725IR,3725UK)
(INTEGRATED CIRCUITS)		
IC101	3771 6946	IC LA7345AM
OR		IC LA7345AM-MPB
IC111	3771 6749	IC LC89925
IC161	3771 4675	IC BA7021
OR	3771 5789	IC LA7221
IC162	3771 6950	IC LC74760M-8797
IC201	3771 6759	IC LA7285M
IC301	3771 6951	IC LC866648V-5554(VCR 3715CE ONLY)
OR	3771 6952	IC LC866648V-5555 (VCR 3725IR,3725UK)
OR	3771 6953	IC LC866648V-5566 (VCR 3715BN,3715NE,3715SE)
IC302	3771 6948	IC LB1643
IC303	3771 8824	IC MN1380-L
OR	3771 6775	IC MN1381-L
IC351	3771 6944	IC BU2896K
IC511	3771 5863	IC L5431
IC512	3771 6945	IC PQ12RF11
IC602		IC AT24C02-10PC(VCR 3725IR ONLY)
OR	3771 6956	IC AT24C04-10PC (VCR 3715BN,3715CE,3715NE,3715SE)
OR	3771 6774	IC LE24C02S1(VCR 3725IR,3725UK)
OR	3771 6748	IC LE24C04S1 (VCR 3715BN,3715CE,3715NE,3715SE)
OR	3771 6588	IC ST24C02AB1(VCR 3725IR,3725UK)
OR		IC X24C02P-C7189(VCR 3725IR,3725UK)
OR		IC X24C04P-C7346 (VCR 3715BN,3715CE,3715NE,3715SE)
IC691	3771 4684	IC LA7910(VCR 3725IR ONLY)
IC692	3771 5050	IC L5631(VCR 3725IR,3725UK)
OR	3771 4088	IC UPC574J(VCR 3725IR,3725UK)
(DIODES)		
D1003	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1004	3656 2770	DIODE GMA01(VCR 3725IR,3725UK)
OR	3656 2230	DIODE 1SS133(VCR 3725IR,3725UK)
D1008	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1009	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1015	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1301	3656 2770	DIODE GMA01(VCR 3725IR,3725UK)
OR	3656 2230	DIODE 1SS133(VCR 3725IR,3725UK)
D1601	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1602	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133

LOCATION	PARTS NO.	DESCRIPTION
D1611	3656 3392	ZENER DIODE GZS5.6X
OR	3656 3081	ZENER DIODE MTZ5.6B
D1612	3656 3392	ZENER DIODE GZS5.6X
OR	3656 3081	ZENER DIODE MTZ5.6B
D1621	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1622	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1671	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D1699	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3001	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3101	3656 2770	DIODE GMA01 (VCR 3715BN,3715CE,3715NE,3715SE)
OR	3656 2230	DIODE 1SS133 (VCR 3715BN,3715CE,3715NE,3715SE)
D3102	3656 2770	DIODE GMA01(VCR 3725UK ONLY)
OR	3656 2230	DIODE 1SS133(VCR 3725UK ONLY)
D3104	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3106	3656 2770	DIODE GMA01(VCR 3725IR,3725UK)
OR	3656 2230	DIODE 1SS133(VCR 3725IR,3725UK)
D3107	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3110	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3121	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3122	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3123	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3502	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D3510	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D5001	3656 3652	DIODE DBC10G
D5003	3656 3131	DIODE 1SS244
D5004	3656 3131	DIODE 1SS244
D5006	3656 3131	DIODE 1SS244
D5010	3656 3178	DIODE AP01C
D5013	⚠ 3681 1830	PHOTO COUPLE PC120FB
D5101	3656 3734	DIODE RK36LF-B1
D5102	3656 3331	DIODE RL2Z-LF-B1
D5103	3656 3131	DIODE 1SS244
D5104	3656 3131	DIODE 1SS244
D5105	3656 3181	DIODE AG01
D5108	3656 8812	ZENER DIODE MTZJ5.6C
D5109	3656 8812	ZENER DIODE MTZJ5.6C
D5110	3656 3055	DIODE DSK10C
OR	3656 3056	DIODE ERA15-02
D5112	3656 8812	ZENER DIODE MTZJ5.6C
D6901	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D6902	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D6903	3656 2770	DIODE GMA01
OR	3656 2230	DIODE 1SS133
D6910	3656 3735	ZENER DIODE MTZJ33C (VCR 3715BN,3715CE,3715NE,3715SE)
(CRYSTAL DEVICES)		
X1001	4421 2238	OSC,CRYSTAL 4.433619MHZ
OR		OSC,CRYSTAL 4.433619MHZ
OR		OSC,CRYSTAL 4.433619MHZ
X1621	4421 2466	CRYSTAL
OR		OSC,CRYSTAL 17.734475MHZ
X3001		OSC,CERAMIC 13.31MHZ
OR	4421 2249	OSC,CERAMIC 13.31MHZ
X3002		OSC,CRYSTAL 32.768KHZ
OR	4421 2348	OSC,CRYSTAL 32KHZ

LOCATION	PARTS NO.	DESCRIPTION
(VARIABLE RESISTORS)		
VR101		VR,SEMI 22KB
OR		VR,SEMI 22KB
VR102	3112 9897	VR,SEMI 2.2KB
OR		VR,SEMI 2.2KB
VR103	3112 9637	VR,SEMI 6.8KB
OR		VR,SEMI 6.8KB
VR104		VR,SEMI 10KB
OR		VR,SEMI 10KB
VR201	3111 8726	SEMI VR 100KB
OR		VR,SEMI 100KB
VR351	3111 8728	SEMI VR 220KB
OR		VR,SEMI 220KB
(TRIMMER)		
CT120	3412 9041	TRIMMER
(INDUCTORS)		
L1002	4543 2197	COIL,INDUCTOR 1.0UHK (VCR 3715CE ONLY)
OR	4543 3478	HF CHOKE 1.0UHM(VCR 3715CE ONLY)
L1004	4543 8727	COIL,INDUCTOR 150UHK
OR		HF CHOKE 150UHK
L1005	4543 8727	COIL,INDUCTOR 150UHK
OR		HF CHOKE 150UHK
L1007	4543 2230	COIL,INDUCTOR 18UHK
OR		HF CHOKE 18UHK
L1008	4543 3252	COIL,INDUCTOR 15UHK
OR		HF CHOKE 15UHK
L1009	4543 3242	COIL,INDUCTOR 2.2UHK
OR		HF CHOKE 2.2UHM
L1010	4543 8728	COIL,INDUCTOR 27UHK
OR		HF CHOKE 27UHK
L1011	4543 8728	COIL,INDUCTOR 27UHK
OR		HF CHOKE 27UHK
L1012	4543 3409	COIL,INDUCTOR 39UHJ
OR	4543 3236	HF CHOKE 39UHJ
L1013	4543 8725	COIL,INDUCTOR 33UHK
OR		HF CHOKE 33UHK
L1101	4543 3337	COIL,INDUCTOR 220UHK
OR		HF CHOKE 220UHK
L1622	4543 2258	COIL,INDUCTOR 5.6UHK
OR		HF CHOKE 5.6UHK
L2002	4543 3871	HF CHOKE 10000UHJ
L2003	4543 3929	COIL,INDUCTOR 560UHJ
L2051	4543 2195	CORE BEADCORES(VCR 3715CE ONLY)
OR	4552 6866	FERRITE CORE(VCR 3715CE ONLY)
L3001	4543 8763	CORE
OR		CORE,BEAD
L3003	4543 8763	CORE(VCR 3715BN,3715CE,3715NE,3715SE)
OR		CORE,BEAD (VCR 3715BN,3715CE,3715NE,3715SE)
L5001	⚠ 4543 4029	LINE FILTER
L5002	⚠ 4552 6841	LINE FILTER(VCR 3715CE ONLY)
L5010	4543 4008	FERRITE CORE
L5101	4543 4008	FERRITE CORE
L5102	4543 4008	FERRITE CORE
L6008	4543 1989	COIL,INDUCTOR 10UHK
OR		HF CHOKE 10UHK
L6009	4543 2256	COIL,INDUCTOR 10UHJ
L6051	4543 2199	COIL,INDUCTOR 100UHK
OR		HF CHOKE 101UHK
L6602	4543 1989	COIL,INDUCTOR 10UHK
OR		HF CHOKE 10UHK
L6604	4543 2197	COIL,INDUCTOR 1.0UHK
OR	4543 3478	HF CHOKE 1.0UHM
L6606	4543 2258	COIL,INDUCTOR 5.6UHK
OR		HF CHOKE 5.6UHK

LOCATION	PARTS NO.	DESCRIPTION
(TRANSFORMERS)		
T2001	3614 7739	TRANS,OSC 70KHZ
OR		TRANS,OSC,70KHZ
OR	4552 6840	70KHZ OSC TRANS
T5001	⚠ 4511 3536	TRANS,POWER,PULSE
T6901	4552 7548	TRANS,IF(VCR 3715CE ONLY)
OR		TRANS,IF(VCR 3715CE ONLY)
OR		TRANS,IF 15.625KHZ(VCR 3715CE ONLY)
(DELAY LINES)		
DL101	4342 1036	DELAY LINE(COMB)
OR		DELAY LINE(COMB)
(CAPACITORS)		
C1001	CERAMIC	22P J 50V
C1002	CERAMIC	220P J 50V
C1003	CERAMIC	82P J 50V
C1005	ELECT	1U M 50V
C1006	CERAMIC	4.7P K 50V
C1007	CERAMIC	390P J 50V
C1008	CERAMIC	22P J 50V (VCR 3725IR,3725UK)
C1010	CERAMIC	82P J 50V
C1011	ELECT	1U M 50V
C1012	ELECT	10U M 16V
C1013	ELECT	0.47U M 50V
C1014	CERAMIC	0.01U M 16V
C1015	CERAMIC	0.033U J 16V
C1016	CERAMIC	0.022U J 16V
C1021	CERAMIC	330P J 50V
C1022	CERAMIC	0.1U J 16V
C1023	CERAMIC	68P J 50V
C1028	CERAMIC	0.01U M 16V
C1030	ELECT	1U M 50V
C1031	ELECT	1U M 50V
C1032	CERAMIC	0.047U J 16V
C1033	CERAMIC	0.01U M 16V
C1036	ELECT	1U M 50V
C1037	ELECT	2.2U M 50V
C1038	CERAMIC	0.022U J 16V
C1039	CERAMIC	0.047U J 16V
C1040	CERAMIC	0.01U M 16V
C1041	ELECT	10U M 16V
C1043	CERAMIC	0.047U Z 16V
C1044	ELECT	220U M 6.3V
C1046	ELECT	10U M 16V
C1047	ELECT	10U M 16V
C1048	CERAMIC	0.01U M 16V
C1049	CERAMIC	33P J 50V
C1051	CERAMIC	470P J 50V (VCR 3715CE ONLY)
C1052	CERAMIC	0.01U M 16V
C1053	CERAMIC	0.01U M 16V
C1058	CERAMIC	27P J 50V
C1059	CERAMIC	18P J 50V
C1060	CERAMIC	33P J 50V
C1061	CERAMIC	43P J 50V
C1062	CERAMIC	180P J 50V
C1081	CERAMIC	82P J 50V
C1092	CERAMIC	330P J 50V
C1093	CERAMIC	0.1U Z 50V
C1094	CERAMIC	0.1U Z 50V
C1096	CERAMIC	0.1U Z 50V
C1097	OS-SOLID	4.7U M 10V
C1101	ELECT	47U M 6.3V
C1102	CERAMIC	0.01U M 16V
C1105	CERAMIC	12P J 50V
C1109	CERAMIC	0.01U M 16V
C1110	ELECT	1U M 50V
C1601	CERAMIC	0.1U Z 50V
C1602	ELECT	470U M 6.3V
C1611	ELECT	0.47U M 50V
C1612	CERAMIC	47P J 50V (VCR 3715CE ONLY)
C1613	CERAMIC	0.047U Z 16V
C1614	ELECT	10U M 16V

LOCATION	PARTS NO.	DESCRIPTION			
C1621		CERAMIC	15P	J	50V
C1622		CERAMIC	15P	J	50V
C1623		ELECT	47U	M	6.3V
C1624		ELECT	47U	M	10V
C1625		ELECT	10U	M	16V
C1627		CERAMIC	1200P	K	16V
C1628		ELECT	1U	M	50V
C1630		CERAMIC	6800P	K	16V
C1631		NP-ELECT	1U	M	50V
C1632		CERAMIC	0.022U	K	16V
C1633		CERAMIC	24P	J	50V
C1634		CERAMIC	10P	J	50V
C1636		CERAMIC	0.01U	M	16V
C1652		CERAMIC	0.1U	Z	50V
C2002		CERAMIC	820P	J	50V
C2004		ELECT	33U	M	6.3V
C2005		CERAMIC	0.018U	K	16V
C2009		ELECT	22U	M	10V
C2010		ELECT	47U	M	6.3V
C2013		CERAMIC	0.015U	J	25V
C2016		ELECT	4.7U	M	25V
C2017		ELECT	10U	M	16V
C2019		ELECT	47U	M	16V
C2020		CERAMIC	220P	K	50V
C2021		POLYPRO	6800P	J	100V
C2022		CERAMIC	0.01U	M	16V
C2024		CERAMIC	0.01U	M	16V
C2051		CERAMIC	120P	K	50V
		(VCR 3715CE ONLY)			
C2054		CERAMIC	0.1U	Z	50V
C2071		CERAMIC	1200P	M	16V
		(VCR 3725IR,3725UK)			
C2072		ELECT	2.2U	M	50V
		(VCR 3725IR,3725UK)			
C2073		CERAMIC	0.027U	J	25V
		(VCR 3725IR,3725UK)			
C2091		CERAMIC	0.1U	Z	50V
C2092		CERAMIC	2200P	M	16V
C2101		CERAMIC	0.1U	Z	50V
C2102		CERAMIC	0.1U	Z	50V
C3001		CERAMIC	10P	J	50V
C3002		CERAMIC	20P	J	50V
C3004		CERAMIC	0.01U	M	16V
C3005		CERAMIC	0.01U	M	16V
C3008		ELECT	22U	M	16V
C3009		CERAMIC	0.01U	M	16V
C3010		ELECT	2.2U	M	50V
C3011		CERAMIC	0.1U	Z	50V
C3012		CERAMIC	0.01U	M	16V
C3013		CERAMIC	0.01U	M	16V
C3014		ELECT	470U	M	6.3V
C3016		CERAMIC	0.01U	M	16V
C3017		CERAMIC	1000P	K	50V
		(VCR 3725IR,3725UK)			
C3021		CERAMIC	47P	J	50V
C3022		DL-ELECT	0.1F	Z	5.5V
C3023		CERAMIC	12P	J	50V
C3051		CERAMIC	0.1U	Z	50V
		(VCR 3715BN,3715CE,3715NE,3715SE)			
C3053		CERAMIC	0.1U	Z	50V
		(VCR 3715BN,3715CE,3715NE,3715SE)			
C3501		CERAMIC	0.015U	K	16V
C3502		CERAMIC	6800P	K	16V
C3503		CERAMIC	0.015U	K	16V
C3505		ELECT	22U	M	16V
C3506		CERAMIC	6800P	K	16V
C3508		ELECT	22U	M	16V
C3509		ELECT	47U	M	6.3V
C3511		CERAMIC	220P	K	50V
C3512		MT-COMPO	0.039U	J	50V
C3513		CERAMIC	0.068U	K	16V
C3514		POLYESTER	0.15U	K	50V
C3515		POLYESTER	0.022U	K	50V
C3516		CERAMIC	2200P	K	16V
C3517		CERAMIC	1500P	K	16V

LOCATION	PARTS NO.	DESCRIPTION			
C3522		CERAMIC	1000P	K	50V
C3523		ELECT	1U	M	50V
C3524		CERAMIC	0.01U	M	16V
C3525		ELECT	0.47U	M	50V
C3526		MT-POLYEST	0.082U	J	50V
C3530		ELECT	47U	M	6.3V
C3536		ELECT	220U	M	6.3V
C3540		CERAMIC	100P	K	50V
C3551		MT-COMPO	0.12U	J	50V
C3552		CERAMIC	56P	J	50V
C3553		ELECT	1U	M	50V
C3554		CERAMIC	150P	J	50V
C3556		CERAMIC	1000P	K	50V
C3558		ELECT	33U	M	16V
C3570		CERAMIC	0.1U	Z	50V
C5001	⚠ 3261 9057	MT-POLYEST	0.22U	M	250V
C5002	⚠ 3261 9056	MT-POLYEST	0.068U	M	250V
C5005	⚠ 3422 0156	CERAMIC	1000P	M	400V
C5007	⚠ 3422 0156	CERAMIC	1000P	M	400V
C5010		ELECT	47U	M	400V
C5011		POLYESTER	0.1U	K	50V
C5015		POLYESTER	3300P	K	50V
C5017		CERAMIC	330P	J	50V
C5020	3261 9052	CERAMIC	39P	J	1K
C5021		CERAMIC	2200P	K	500V
C5022		CERAMIC	2200P	K	500V
C5023		CERAMIC	47P	J	50V
C5025		CERAMIC	100P	K	1K
C5101		ELECT	1000U	M	6.3V
C5102		ELECT	1000U	M	6.3V
C5105		ELECT	470U	M	16V
C5106		ELECT	1000U	M	16V
C5108		ELECT	22U	M	50V
C5109		ELECT	47U	M	35V
C5110		ELECT	220U	M	6.3V
C5113		ELECT	330U	M	16V
C5115		CERAMIC	0.1U	Z	50V
C5116		ELECT	3.3U	M	50V
C5124		ELECT	0.22U	M	50V
C5135		POLYESTER	0.1U	K	50V
C6001		ELECT	4.7U	M	50V
		(VCR 3725IR ONLY)			
C6003		ELECT	2.2U	M	50V
		(VCR 3725IR ONLY)			
C6004		MT-COMPO	0.1U	J	50V
		(VCR 3725IR,3725UK)			
C6005		CERAMIC	0.1U	Z	50V
		(VCR 3725IR,3725UK)			
C6006		CERAMIC	0.047U	Z	16V
		(VCR 3725IR,3725UK)			
C6007		ELECT	10U	M	16V
C6008		CERAMIC	0.033U	Z	16V
C6009		ELECT	47U	M	16V
C6010		CERAMIC	2200P	M	16V
C6014		CERAMIC	2200P	M	16V
		(VCR 3725IR ONLY)			
C6015		CERAMIC	2200P	M	16V
		(VCR 3725IR ONLY)			
C6052		CERAMIC	39P	J	50V
C6053		CERAMIC	33P	J	50V
C6081		CERAMIC	0.1U	Z	50V
		(VCR 3715BN,3715CE,3715NE,3715SE)			
C6601		ELECT	10U	M	16V
C6602		ELECT	10U	M	16V
C6901		ELECT	1U	M	50V
		(EXCEPT VCR 3715CE)			
C6902		CERAMIC	0.047U	Z	16V
		(VCR 3715CE ONLY)			
C6903		CERAMIC	0.01U	M	16V
		(EXCEPT VCR 3715CE)			
C6904		ELECT	10U	M	16V
		(VCR 3715CE ONLY)			
C6905		CERAMIC	22P	J	50V
		(VCR 3725IR,3725UK)			
OR		CERAMIC	56P	J	50V
		(VCR 3715BN,3715NE,3715SE)			

LOCATION	PARTS NO.	DESCRIPTION			
C6906		CERAMIC	0.022U	Z	25V
		(VCR 3715CE ONLY)			
C6907		ELECT	1U	M	50V
		(EXCEPT VCR 3715CE)			
OR		ELECT	0.22U	M	50V
		(VCR 3715CE ONLY)			
C6908		CERAMIC	0.1U	Z	50V
		(VCR 3715CE ONLY)			
C6909		ELECT	100U	M	16V
C6910		CERAMIC	1000P	K	50V
		(EXCEPT VCR 3715CE)			
C6922		ELECT	22U	M	50V
C6924		CERAMIC	180P	K	50V
		(VCR 3725IR,3725UK)			
C6925		MT-COMPO	0.33U	J	50V
		(VCR 3725IR,3725UK)			
C6926		MT-COMPO	0.22U	J	50V
		(VCR 3725IR,3725UK)			
(RESISTORS)					
R1001		CARBON	3.3K	JA	1/4W
R1002		CARBON	1K	JA	1/4W
R1003		CARBON	3.9K	JA	1/4W
R1004		CARBON	1K	JA	1/4W
R1005		CARBON	270	JA	1/4W
R1006		CARBON	820	JA	1/4W
R1007		CARBON	1K	JA	1/4W
R1008		CARBON	2.7K	JA	1/4W
R1009		CARBON	680	JA	1/4W
R1010		CARBON	2.2K	JA	1/4W
		(VCR 3725IR,3725UK)			
R1011		CARBON	100K	JA	1/4W
R1012		CARBON	1K	JA	1/4W
R1013		CARBON	1K	JA	1/4W
R1014		CARBON	2.2K	JA	1/4W
R1019		CARBON	22K	JA	1/4W
R1020		CARBON	12K	JA	1/4W
R1021		CARBON	1K	JA	1/4W
R1022		CARBON	390	JA	1/4W
R1024		CARBON	1K	JA	1/4W
R1026		CARBON	1M	JA	1/4W
R1027		CARBON	8.2K	JA	1/4W
R1028		CARBON	1.8K	JA	1/4W
R1029		CARBON	1K	JA	1/4W
R1032		CARBON	22K	JA	1/4W
R1033		CARBON	1K	JA	1/4W
R1035		CARBON	470	JA	1/4W
R1036		CARBON	1.5K	JA	1/4W
R1038		CARBON	1K	JA	1/4W
R1040		CARBON	150	JA	1/4W
R1044		CARBON	12K	JA	1/4W
R1046		CARBON	33K	JA	1/4W
R1047		CARBON	8.2K	JA	1/4W
R1048		CARBON	4.7K	JA	1/4W
R1049		CARBON	12K	JA	1/4W
R1052		CARBON	1K	JA	1/4W
R1053		CARBON	330	JA	1/4W
R1054		CARBON	3.3K	JA	1/4W
R1055		CARBON	18K	JA	1/4W
R1059		CARBON	1.8K	JA	1/4W
R1063		CARBON	22K	JA	1/4W
R1071		CARBON	2.7K	JA	1/4W
R1072		CARBON	1.8K	JA	1/4W
R1105		CARBON	3.9K	JA	1/4W
R1106		CARBON	6.8K	JA	1/4W
R1601		CARBON	560	JA	1/4W
R1602		CARBON	75	JA	1/4W
R1603		CARBON	18	JA	1/4W
R1611		CARBON	1K	JA	1/4W
R1612		CARBON	1K	JA	1/4W
R1614		CARBON	1K	JA	1/4W
R1616		CARBON	330	JA	1/4W
R1617		CARBON	390	JA	1/4W
R1621		CARBON	22K	JA	1/4W
R1622		CARBON	4.3K	JA	1/4W
R1623		CARBON	1.5K	JA	1/4W
R1624		CARBON	10K	JA	1/4W
R1625		CARBON	6.8K	JA	1/4W

LOCATION	PARTS NO.	DESCRIPTION			
R1626		CARBON	100K	JA	1/4W
R1627		CARBON	220	JA	1/4W
R1628		CARBON	100	JA	1/4W
R1629		CARBON	220	JA	1/4W
R1630		CARBON	1.5K	JA	1/4W
R1631		CARBON	6.8K	JA	1/4W
R1632		CARBON	1K	JA	1/4W
R1633		CARBON	1K	JA	1/4W
R1651		CARBON	8.2K	JA	1/4W
R1652		CARBON	12K	JA	1/4W
R1653		CARBON	56	JA	1/4W
R1654		CARBON	27K	JA	1/4W
R1655		CARBON	3K	JA	1/4W
R1656		CARBON	1.2K	JA	1/4W
R1657		CARBON	5.6K	JA	1/4W
R1658		CARBON	5.6K	JA	1/4W
R1659		CARBON	1.2K	JA	1/4W
R1671		CARBON	100	JA	1/4W
R1673		CARBON	4.7K	JA	1/4W
R2001		CARBON	100	JA	1/4W
R2002		CARBON	2.7K	JA	1/4W
R2003		CARBON	51	JA	1/4W
R2004		CARBON	390K	JA	1/4W
R2005		CARBON	6.2K	JA	1/4W
R2009		CARBON	1M	JA	1/4W
R2010		CARBON	10K	JA	1/4W
R2011		CARBON	15K	JA	1/4W
R2012		CARBON	33K	JA	1/4W
R2013		CARBON	6.8K	JA	1/4W
R2014		CARBON	1.2K	JA	1/4W
R2018		CARBON	22K	JA	1/4W
R2021		CARBON	33	JA	1/4W
R2022		CARBON	47	JA	1/4W
R2023		CARBON	15K	JA	1/4W
R2024		CARBON	6.8	JA	1/4W
R2071		CARBON	68	JA	1/4W
		(VCR 3725IR,3725UK)			
R2091		CARBON	2.7K	JA	1/4W
R2101		CARBON	2.7K	JA	1/4W
R2103		CARBON	39K	JA	1/4W
R2104		CARBON	22K	JA	1/4W
R3001	⚠ 3151 7950	FUSIBLE RES	3.3	JA	1/2W
R3004		CARBON	1.5K	JA	1/4W
R3008		CARBON	4.7K	JA	1/4W
R3009		CARBON	4.7K	JA	1/4W
R3010		CARBON	4.7K	JA	1/4W
R3011		CARBON	47K	JA	1/4W
R3012		CARBON	4.7K	JA	1/4W
R3013		CARBON	4.7K	JA	1/4W
R3014		CARBON	200K	JA	1/4W
R3015		CARBON	200K	JA	1/4W
R3018		CARBON	10K	JA	1/4W
R3019		CARBON	36K	JA	1/4W
R3020		CARBON	10K	JA	1/4W
R3023		CARBON	1K	JA	1/4W
R3024		CARBON	1K	JA	1/4W
R3025		CARBON	1K	JA	1/4W
R3026		CARBON	1K	JA	1/4W
R3032		CARBON	33K	JA	1/4W
R3034		CARBON	12K	JA	1/4W
R3035		CARBON	10K	JA	1/4W
R3036		CARBON	10K	JA	1/4W
R3046		CARBON	4.7K	JA	1/4W
R3047		CARBON	2K	JA	1/4W
R3048		CARBON	1.3K	JA	1/4W
R3049		CARBON	2.7K	JA	1/4W
R3050		CARBON	20K	JA	1/4W
R3051		CARBON	20K	JA	1/4W
R3061		CARBON	47K	JA	1/4W
R3062		CARBON	33K	JA	1/4W
R3081		CARBON	1K	JA	1/4W
		(VCR 3715BN,3715CE,3715NE,3715SE)			
R3082		CARBON	1K	JA	1/4W
		(VCR 3715BN,3715CE,3715NE,3715SE)			
R3083		CARBON	1K	JA	1/4W
		(VCR 3715BN,3715CE,3715NE,3715SE)			

LOCATION	PARTS NO.	DESCRIPTION			
R3084		CARBON	1K	JA	1/4W
		(VCR 3715BN,3715CE,3715NE,3715SE)			
R3101		CARBON	100K	JA	1/4W
R3102		CARBON	100K	JA	1/4W
R3103		CARBON	100K	JA	1/4W
R3104		CARBON	100K	JA	1/4W
R3501		CARBON	100K	JA	1/4W
R3502		CARBON	100K	JA	1/4W
R3503		CARBON	330K	JA	1/4W
R3504		CARBON	150K	JA	1/4W
R3505		CARBON	15K	JA	1/4W
R3506		CARBON	220K	JA	1/4W
R3507		CARBON	150K	JA	1/4W
R3508		CARBON	27K	JA	1/4W
R3516		CARBON	10K	JA	1/4W
R3517		CARBON	47K	JA	1/4W
R3518		CARBON	47K	JA	1/4W
R3520		CARBON	390K	JA	1/4W
R3521		CARBON	10K	JA	1/4W
R3525		CARBON	1K	JA	1/4W
R3526		CARBON	2.2K	JA	1/4W
R3527		CARBON	1K	JA	1/4W
R3528		CARBON	510	JA	1/4W
R3529		CARBON	510	JA	1/4W
R3533		CARBON	1.5K	JA	1/4W
		(VCR 3725IR,3725UK)			
R3537		CARBON	8.2K	JA	1/4W
R3546		CARBON	4.7K	JA	1/4W
R3547		CARBON	15K	JA	1/4W
R3549		CARBON	10K	JA	1/4W
R3550		CARBON	8.2K	JA	1/4W
R3556		CARBON	10K	JA	1/4W
R3557		CARBON	330K	JA	1/4W
R3558		CARBON	470	JA	1/4W
R3560		CARBON	1K	JA	1/4W
R5001		SOLID	2.7M	KB	1/2W
R5002		CARBON	270K	JA	1/4W
R5003		CARBON	390K	JA	1/4W
R5005		CARBON	180K	JA	1/4W
R5006		CARBON	10K	JA	1/4W
R5007		CARBON	22K	JA	1/4W
R5009		CARBON	56K	JA	1/4W
R5012		CARBON	1.8K	JA	1/4W
R5014		CARBON	47	JA	1/4W
R5020		CARBON	15K	JA	1/4W
R5021		CARBON	15K	JA	1/4W
R5022		CARBON	15K	JA	1/4W
R5101		CARBON	330	JA	1/4W
R5102		CARBON	470	JA	1/4W
R5103		CARBON	560	JA	1/4W
R5104		CARBON	10K	JA	1/4W
R5111		CARBON	560	JA	1/4W
R5112		CARBON	3.6K	JA	1/4W
R5114		CARBON	47	JA	1/4W
R5115		CARBON	750	JA	1/4W
R5116		CARBON	560	JA	1/4W
R5120		CARBON	4.7	JA	1/4W
R5121		CARBON	9.1	JA	1/4W
R5123		CARBON	2.7K	JA	1/4W
R5135		CARBON	470	JA	1/4W
R6001		CARBON	390K	JA	1/4W
R6002		CARBON	270K	JA	1/4W
R6003		CARBON	390K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6004		CARBON	470K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6006		CARBON	3.3K	JA	1/4W
R6008		CARBON	1M	JA	1/4W
		(VCR 3725IR,3725UK)			
R6009		CARBON	4.7K	JA	1/4W
R6051		CARBON	560	JA	1/4W
R6052		CARBON	1.8K	JA	1/4W
R6053		CARBON	1K	JA	1/4W
R6054		CARBON	820	JA	1/4W
R6055		CARBON	5.6K	JA	1/4W

LOCATION	PARTS NO.	DESCRIPTION			
R6056		CARBON	1.8K	JA	1/4W
R6057		CARBON	1.3K	JA	1/4W
R6071	⚠ 3151 7808	FUSIBLE RES	680	GA	1/4W
R6691		CARBON	1K	JA	1/4W
R6692		CARBON	750	JA	1/4W
R6901		CARBON	100	JA	1/4W
R6902		CARBON	1K	JA	1/4W
R6903		CARBON	330	JA	1/4W
		(VCR 3715CE ONLY)			
OR		CARBON	100K	JA	1/4W
		(EXCEPT VCR 3715CE)			
R6904		CARBON	10K	JA	1/4W
		(VCR 3715CE ONLY)			
R6905		CARBON	470	JA	1/4W
		(VCR 3715CE ONLY)			
OR		CARBON	680	JA	1/4W
		(EXCEPT VCR 3715CE)			
R6906		CARBON	330K	JA	1/4W
		(VCR 3715CE ONLY)			
OR		CARBON	390K	JA	1/4W
		(EXCEPT VCR 3715CE)			
R6907		CARBON	10K	JA	1/4W
		(VCR 3715CE ONLY)			
R6908		CARBON	82	JA	1/4W
		(VCR 3715CE ONLY)			
R6909		CARBON	1K	JA	1/4W
		(EXCEPT VCR 3715CE)			
OR		CARBON	3.3K	JA	1/4W
		(VCR 3715CE ONLY)			
R6910		CARBON	1K	JA	1/4W
		(VCR 3715CE ONLY)			
OR		CARBON	27K	JA	1/4W
		(EXCEPT VCR 3715CE)			
R6911		CARBON	1K	JA	1/4W
		(EXCEPT VCR 3715CE)			
OR		CARBON	510	JA	1/4W
		(VCR 3715CE ONLY)			
R6914		CARBON	5.6K	JA	1/4W
R6915		CARBON	3.9K	JA	1/4W
R6916		CARBON	100	JA	1/4W
R6921		CARBON	1K	JA	1/4W
		(VCR 3715BN,3715CE,3715NE,3715SE)			
OR		CARBON	33K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6922		CARBON	10K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6923		CARBON	10K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6924		CARBON	18K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6925		CARBON	15K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6926		CARBON	12K	JA	1/4W
		(VCR 3725IR,3725UK)			
R6927		CARBON	120	JA	1/4W
		(VCR 3725IR,3725UK)			
R6928		CARBON	3.9K	JA	1/4W
		(VCR 3725IR ONLY)			

(SWITCHES)

S3101		SW,PUSH,REW
OR	4112 7524	SWITCH,PUSH,REW
S3102		SW,PUSH,PLAY
OR	4112 7524	SWITCH,PUSH,PLAY
S3103		SW,PUSH,REC
OR	4112 7524	SWITCH,PUSH,REC
S3104		SW,PUSH,EJECT
OR	4112 7524	SWITCH,PUSH,EJECT
S3105		SW,PUSH,FF
OR	4112 7524	SWITCH,PUSH,FF
S3106		SW,PUSH,STEP
OR	4112 7524	SWITCH,PUSH,STEP
S3107		SW,PUSH,PAUSE
OR	4112 7524	SWITCH,PUSH,PAUSE
S3108		SW,PUSH,POWER
OR	4112 7524	SWITCH,PUSH,POWER
S3117		SW,PUSH,CH +
OR	4112 7524	SWITCH,PUSH,CH +

LOCATION	PARTS NO.	DESCRIPTION
S3118		SW,PUSH,CH -
OR	4112 7524	SWITCH,PUSH,CH -
(FUSE)		
F5001	⚠ 3151 7951	FUSE 250V 2.5A
(PROTECTOR)		
PR511	⚠ 4375 2140	CIRCUIT PROTECTOR
(CONNECTOR)		
CN501	⚠ 4144 8389	SOCKET,INLET AC
(MISCELLANEOUS)		
	8681 4390	FIXER
OR	8681 4987	HOLDER,FUSE,F5001
OR	8681 4988	HOLDER,FUSE,F5001

COMPL PWB,VP-1

COMPLNO.6913 4639

(SEMICONDUCTORS)		
Q1801	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-Q
OR	3614 5240	TR 2SC1740S-R
OR	3614 4947	TR 2SC536-E-SPA
OR	3614 3969	TR 2SC536-F-SPA
Q1851	3614 4463	TR 2SC2058S-Q
OR	3614 4306	TR 2SC2839-E-SPA
OR	3614 4436	TR 2SC2839-F-SPA
Q1852	3614 4690	TR KSA1175-Y
OR	3614 4942	TR 2SA608-E-SPA
OR	3614 5281	TR 2SA608-F-SPA
OR	3614 4542	TR 2SA933S-Q
OR	3614 5540	TR 2SA933S-R
(INTEGRATED CIRCUITS)		
IC181	3771 6584	IC LA7377A
IC191	3771 6756	IC TEA5750
(DIODES)		
D1901	3656 3655	ZENER DIODE GZS3.9X
OR	3656 3674	ZENER DIODE MTZJ3.9A
(VARIABLE RESISTORS)		
VR182	3111 8971	SEMI VR 2.2KB
OR	3112 9636	VR,SEMI 2.2KB
(INDUCTORS)		
L1801	4543 2199	COIL,INDUCTOR 100UHK
OR		HF CHOKE 101UHK
L1802	4543 3251	COIL,INDUCTOR 68UHK
OR		HF CHOKE 68UHK
L1851	4543 2199	COIL,INDUCTOR 100UHK
OR		HF CHOKE 101UHK
L1852	4543 3251	COIL,INDUCTOR 68UHK
OR		HF CHOKE 68UHK
L1901	4543 1949	COIL,INDUCTOR 47UHJ
L1902	4543 1949	COIL,INDUCTOR 47UHJ
L1903	4543 4007	COIL,INDUCTOR 120UHJ

(CAPACITORS)					
C1801		OS-SOLID	4.7U	M	10V
C1804		CERAMIC	0.01U	M	16V
C1805		ELECT	0.33U	M	50V
C1807		CERAMIC	470P	J	50V
C1808		CERAMIC	91P	J	50V
C1809		CERAMIC	0.01U	M	16V
C1810		CERAMIC	0.01U	M	16V
C1811		CERAMIC	0.01U	M	16V
C1812		CERAMIC	0.01U	M	16V
C1813		CERAMIC	0.033U	J	16V
C1814		CERAMIC	0.033U	J	16V
C1851		CERAMIC	390P	J	50V
C1852		CERAMIC	330P	J	50V
C1853		CERAMIC	22P	J	50V
C1856		CERAMIC	47P	J	50V
C1857		CERAMIC	82P	J	50V
C1901		CERAMIC	220P	J	50V
C1902		CERAMIC	100P	J	50V
C1903		CERAMIC	0.01U	M	16V
C1904		CERAMIC	39P	J	50V
C1905		CERAMIC	0.01U	M	16V
C1906		CERAMIC	0.01U	M	16V
C1907		CERAMIC	0.1U	Z	50V
C1908		ELECT	47U	M	6.3V
C1909		OS-SOLID	1U	M	25V

(RESISTORS)					
R1801		CARBON	5.6K	JA	1/4W
R1803		CARBON	10K	JA	1/4W
R1805		CARBON	1.5K	JA	1/4W
R1807		CARBON	1K	JA	1/4W
R1808		CARBON	2.2K	JA	1/4W
R1811		CARBON	5.1K	JA	1/4W
R1813		CARBON	1K	JA	1/4W
R1814		CARBON	22K	JA	1/4W
R1815		CARBON	5.6K	JA	1/4W
R1816		CARBON	1.2K	JA	1/4W
R1851		CARBON	330	JA	1/4W
R1852		CARBON	22K	JA	1/4W
R1853		CARBON	22K	JA	1/4W
R1854		CARBON	390	JA	1/4W
R1855		CARBON	390	JA	1/4W
R1856		CARBON	2.2K	JA	1/4W
R1862		CARBON	470	JA	1/4W
R1869		CARBON	1.8K	JA	1/4W
R1901		CARBON	22K	JA	1/4W
R1902		CARBON	27K	JA	1/4W
R1903		CARBON	1K	JA	1/4W
R1904		CARBON	100	JA	1/4W
R1905		CARBON	820	JA	1/4W
R1906		CARBON	2.7K	JA	1/4W
R1907		CARBON	1M	JA	1/4W
R1908		MT-FILM	1.2K	FD	1/4W
R1909		MT-FILM	1.1K	FD	1/4W

COMPL PWB,TM-1

COMPLNO.6913 4631

(REMOTE RECEIVERS)		
RR701	6913 6685	IR RECEIVER PACK UNIT
OR		IR RECEIVER PACK UNIT
(DISPLAYS)		
A7001	3686 1176	FLUORESCENT TUBE
OR		FLUORESCENT TUBE
(MISCELLANEOUS)		
	8681 5261	HOLDER FL

COMPL PWB,TM-7

COMPLNO.6913 4634 (VCR 3715BN ONLY)

(INTEGRATED CIRCUIT)		
IC771	3771 6949	IC MV182
(CRYSTAL DEVICE)		
X7701	4421 2271	OSC,CRYSTAL 6.9375MHZ
(INDUCTORS)		
L7701	4543 1989	COIL,INDUCTOR 10UHK
OR		HF CHOKE 10UHK

(CAPACITORS)					
C7701		ELECT	1U	M	50V
C7702		CERAMIC	0.22U	Z	16V
C7703		MT-COMPO	0.22U	J	50V
C7705		CERAMIC	27P	J	50V
C7706		CERAMIC	27P	J	50V
C7707		CERAMIC	100P	J	50V
C7708		CERAMIC	0.1U	Z	25V
(RESISTOR)					
R7702		MT-GLAZE	0.000	ZA	1/10W

LOCATION	PARTS NO.	DESCRIPTION			
COMPL PCB,TM-8					
COMPLNO.6913 0957 (VCR 3715CE ONLY)					
(INTEGRATED CIRCUITS)					
IC781	3771 5597	IC SDA5642			
OR		IC SDA5642-5			
(CAPACITORS)					
C7802		CERAMIC	150P	J	50V
C7803		MT-COMPO	0.33U	J	50V
C7804		POLYESTER	0.1U	J	50V
(RESISTORS)					
R7805		MT-GLAZE	2.2K	JA	1/10W
R7806		MT-GLAZE	1M	JA	1/10W
R7807		MT-GLAZE	820K	JA	1/10W
R7808		MT-GLAZE	100K	JA	1/10W
R7809		MT-GLAZE	10K	JA	1/10W
R7810		MT-GLAZE	1.2M	JA	1/10W
R7811		MT-GLAZE	100	JA	1/10W
R7812		MT-GLAZE	5.6K	JA	1/10W
COMPL PWB,TB-1					
COMPLNO.6913 4632					
(SEMICONDUCTORS)					
Q8581	3614 4402	TR DTA144EK			
OR	3614 4498	TR 2SA1341			
Q8582	3614 4466	TR 2SC2412K-R			
OR	3614 5272	TR 2SC2412K-S			
OR	3614 4383	TR 2SC2812-L5			
OR	3614 4635	TR 2SC2812-L6			
Q8583	3614 4402	TR DTA144EK			
OR	3614 4498	TR 2SA1341			
Q8584	3614 4466	TR 2SC2412K-R			
OR	3614 5272	TR 2SC2412K-S			
OR	3614 4383	TR 2SC2812-L5			
OR	3614 4635	TR 2SC2812-L6			
Q8585	3614 4469	TR DTC144EK			
OR	3614 4359	TR 2SC3395			
(DIODES)					
D8697	3656 3060	ZENER DIODE GZS15Y			
OR	3656 3575	ZENER DIODE MTZJ15B			
(CAPACITORS)					
C8504		CERAMIC	1000P	K	50V
C8508		CERAMIC	6800P	K	50V
C8513		CERAMIC	1000P	K	50V
C8602		ELECT	10U	M	16V
(RESISTORS)					
R8502		MT-GLAZE	2.7K	JA	1/10W
R8504		MT-GLAZE	560	JA	1/10W
R8508		MT-GLAZE	2.7K	JA	1/10W
R8522		MT-GLAZE	2.7K	JA	1/10W
R8528		MT-GLAZE	2.7K	JA	1/10W
R8571		MT-GLAZE	510	JA	1/10W
R8572		MT-GLAZE	820	JA	1/10W
R8581		MT-GLAZE	2.2K	JA	1/10W
R8582		MT-GLAZE	3.9K	JA	1/10W
R8584		MT-GLAZE	10K	JA	1/10W
R8586		MT-GLAZE	2.2K	JA	1/10W
R8587		MT-GLAZE	3.9K	JA	1/10W
R8589		MT-GLAZE	10K	JA	1/10W
R8590		MT-GLAZE	2.2K	JA	1/10W
R8602		MT-GLAZE	75	JA	1/10W
R8603		MT-GLAZE	75	JA	1/10W
(JUMPERS)					
J8502		MT-GLAZE	0.000	ZA	1/10W
J8506		MT-GLAZE	0.000	ZA	1/10W
J8680		MT-GLAZE	0.000	ZA	1/10W
J8681		MT-GLAZE	0.000	ZA	1/10W
J8682		MT-GLAZE	0.000	ZA	1/10W
J8683		MT-GLAZE	0.000	ZA	1/10W
J8684		MT-GLAZE	0.000	ZA	1/10W
J8685		MT-GLAZE	0.000	ZA	1/10W

LOCATION	PARTS NO.	DESCRIPTION			
(CONNECTORS)					
CN871		SOCKET,RGB	21P		
OR		SOCKET,21P			
CN872		SOCKET,RGB	21P		
OR		SOCKET,21P			
(MISCELLANEOUS)					
		PAD			
COMPL,MC-1					
COMPL.NO. 6913 1133					
(DIODE)					
D8001	3683 1088	PHOTO COUPLE SPI-315-04-C			
OR	3683 1102	PHOTO DIODE ON2170-R			
(RESISTOR)					
R8001		CARBON	270	JA	1/4W
OR		CARBON	270	JA	1/6W
R8002		CARBON	100	JA	1/4W
OR		CARBON	100	JA	1/6W
(SWITCH)					
S8001	4112 9704	SPECIAL SWITCH			
FLEXIBLE FLAT CABLE					
	4131 4333	FLEXIBLE FLAT CABLES,CN303-CN811			
	4131 4334	FLEXIBLE FLAT CABLES,CN301-CN701			
	4131 4296	FLEXIBLE FLAT CABLES,CN101-CN181			

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VCR 3715 CE
VCR 3715 SE
VCR 3715 NE
VCR 3715 BN
VCR 3725 UK
VCR 3725 IR

BLOCK DIAGRAMS,CIRCUIT DIAGRAMS & PRINTED WIRING BOARDS

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NOTES:

1. All resistance values in "OHMS" unless otherwise noted.
   (K=1,000 M=1,000,000)
2. All capacitance values in "µfd" unless otherwise noted.
   p=pico farad
3. All inductance values in "mH"unless otherwise noted.
   µ=micro henry.

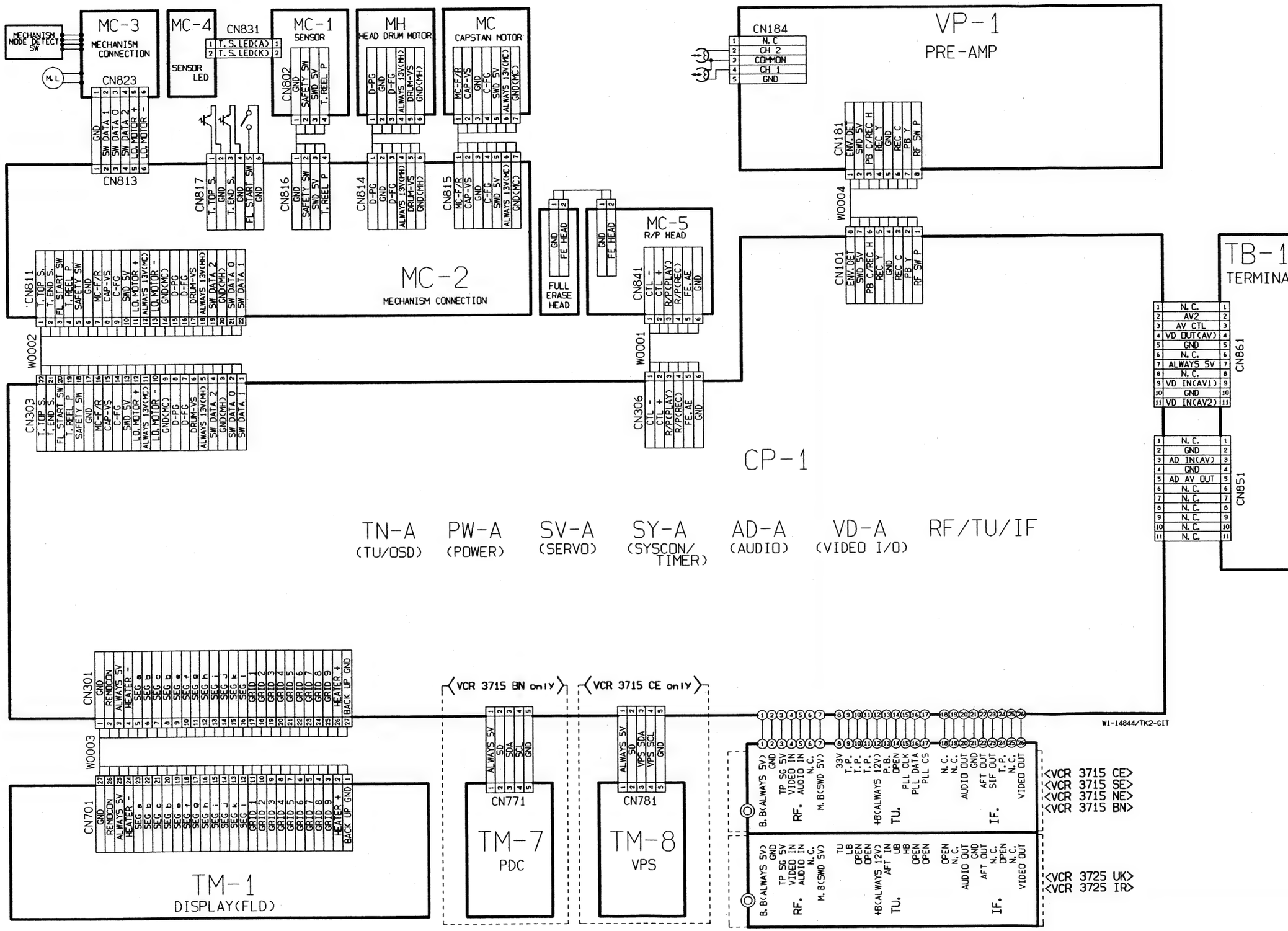
PRODUCT SAFETY NOTICE

THE COMPONENTS DESIGNATED BY A SYMBOL (⚠) IN THIS SCHEMATIC DIAGRAM DESIGNATES COMPONENTS WHOSE VALUE ARE OF SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. SHOULD ANY COMPONENT DESIGNATED BY A SYMBOL NEED TO BE REPLACED, USE ONLY THE PART DESIGNATED IN THE PARTS LIST. DO NOT DEVIATE FROM THE RESISTANCE, WATTAGE AND VOLTAGE RATINGS SHOWN.

PAL_A

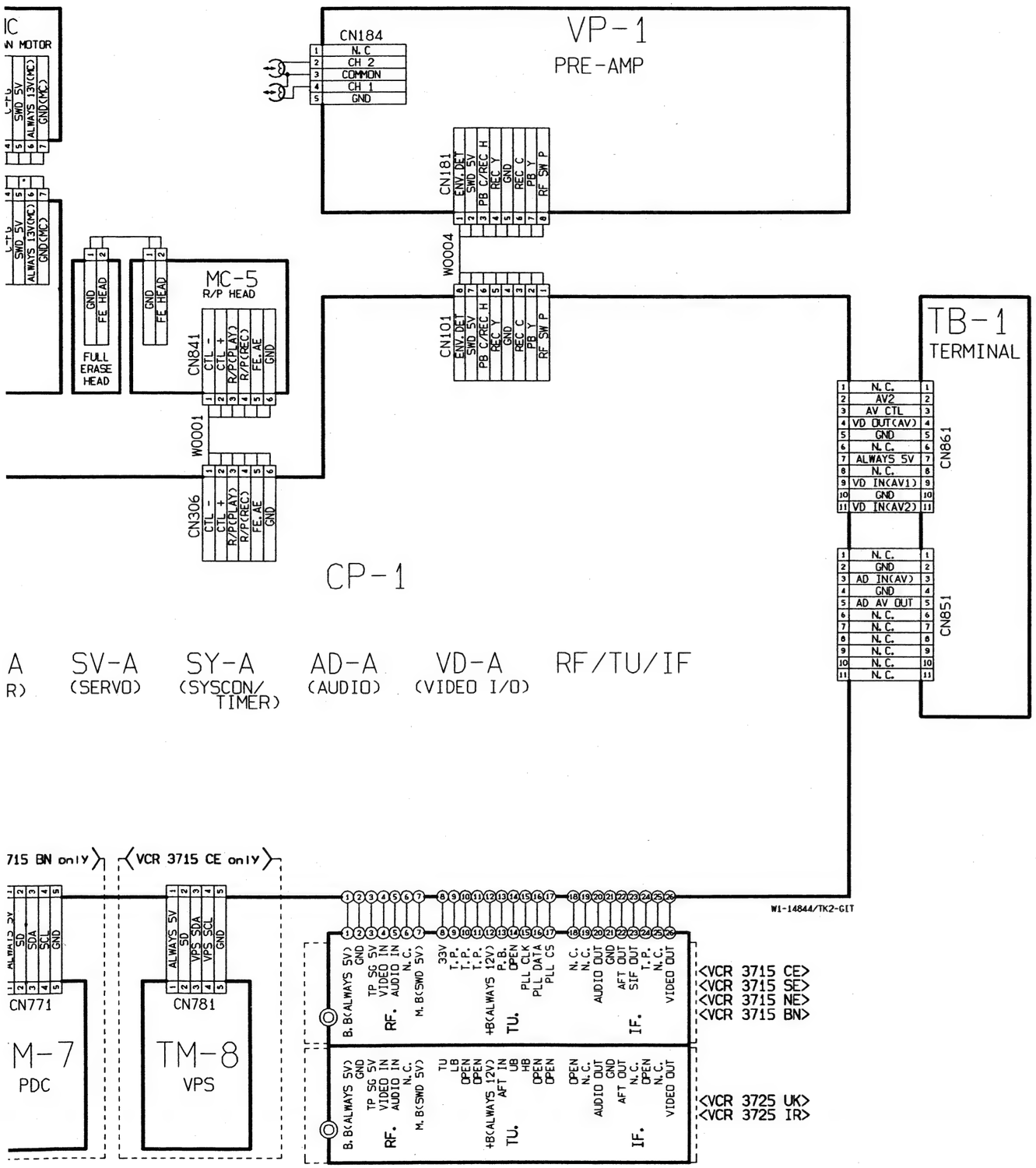
1. OVERALL WIRING, MECHANISM CONNECTION, & BLOCK DIAGRAMS

1-1. OVERALL WIRING

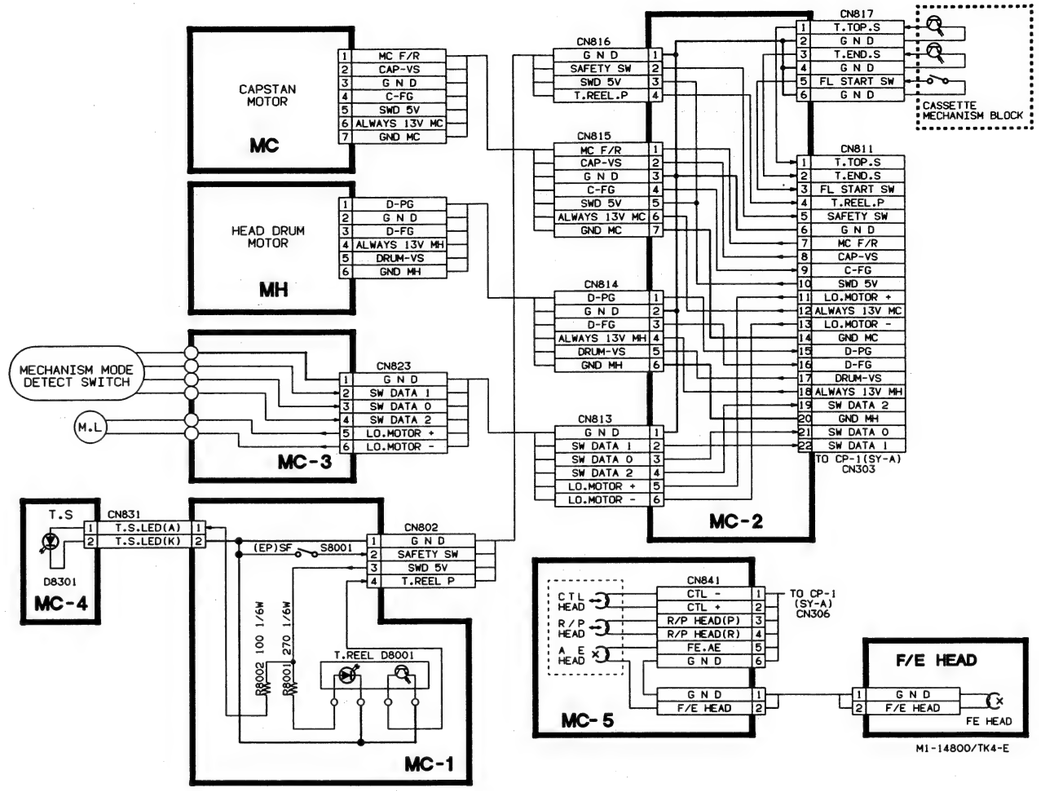


AMS

1-1. OVERALL WIRING

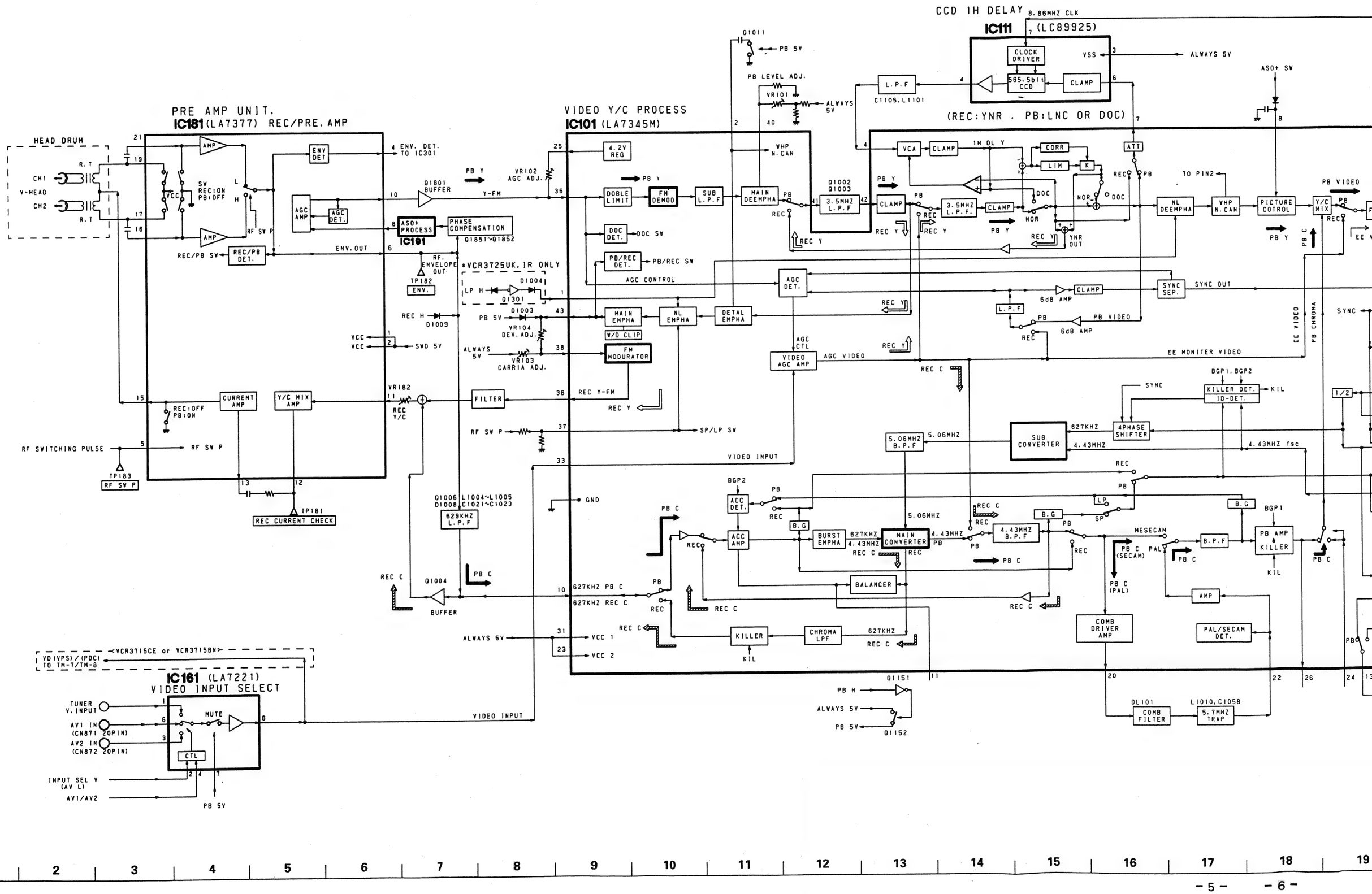


1-2. MECHANISM CONNECTION



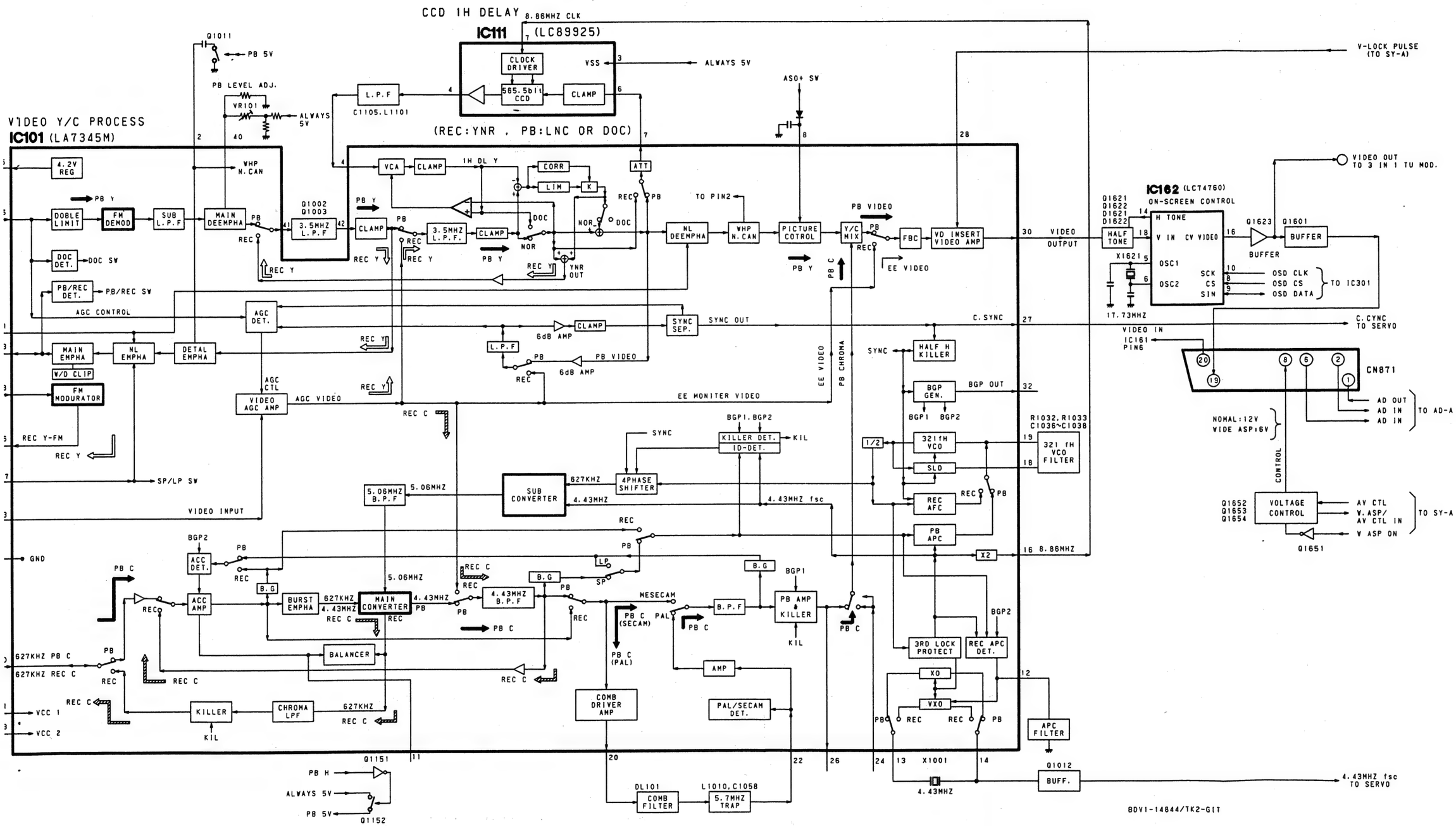
1-3. VIDEO CIRCUIT

CP-1 BOARD VIDEO BASIC BLOCK DIAGRAM

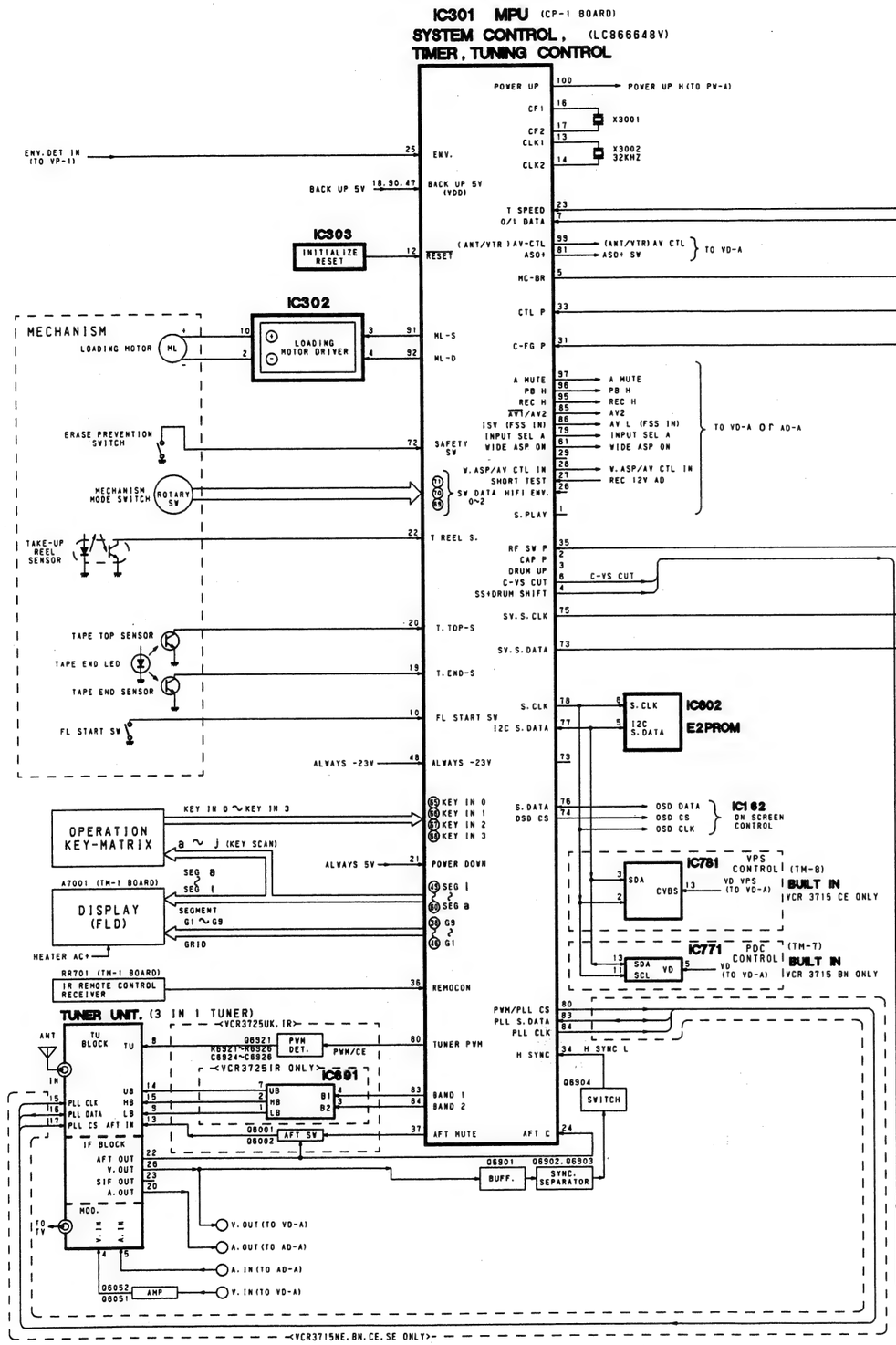


1-3. VIDEO CIRCUIT

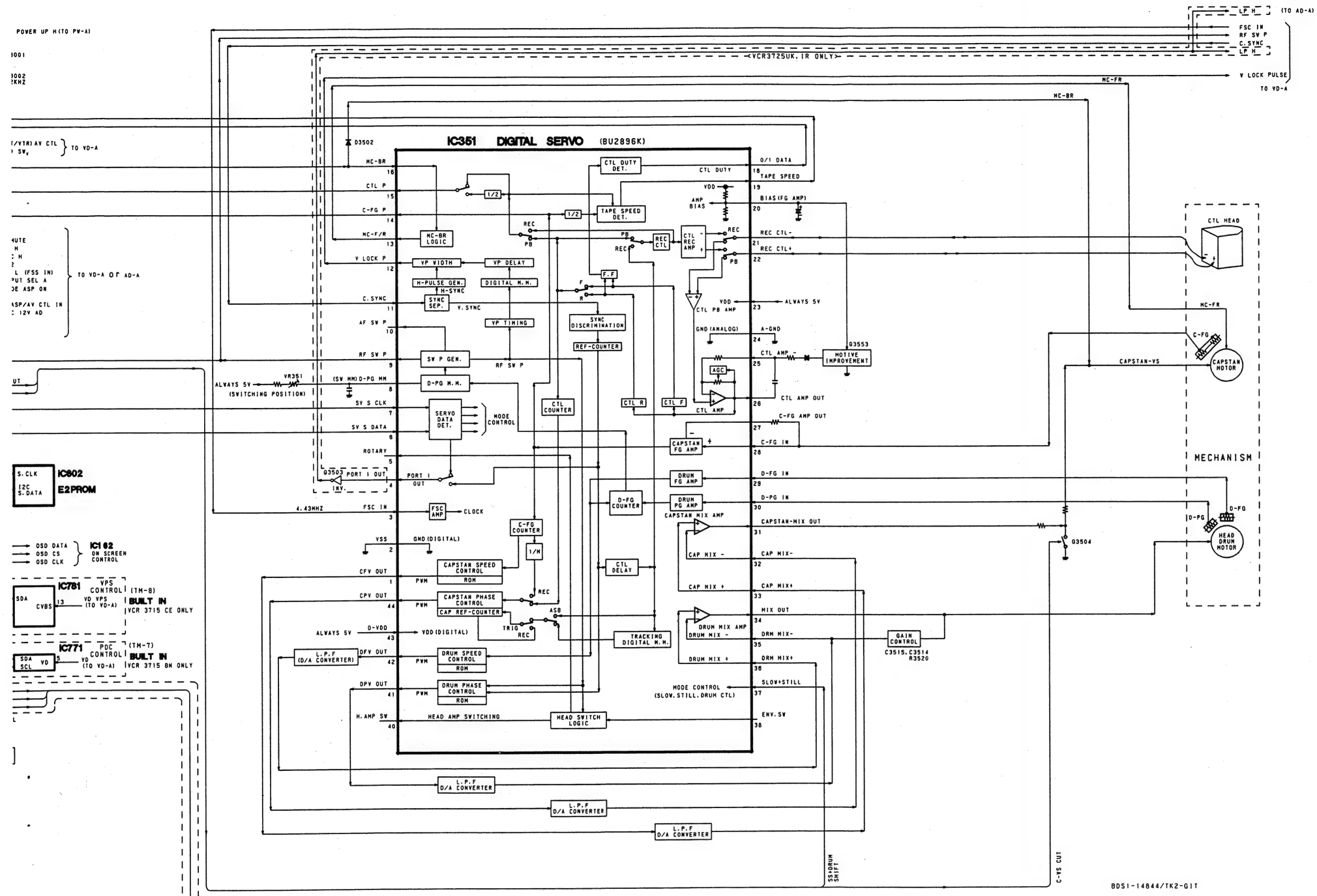
CP-1 BOARD VIDEO BASIC BLOCK DIAGRAM



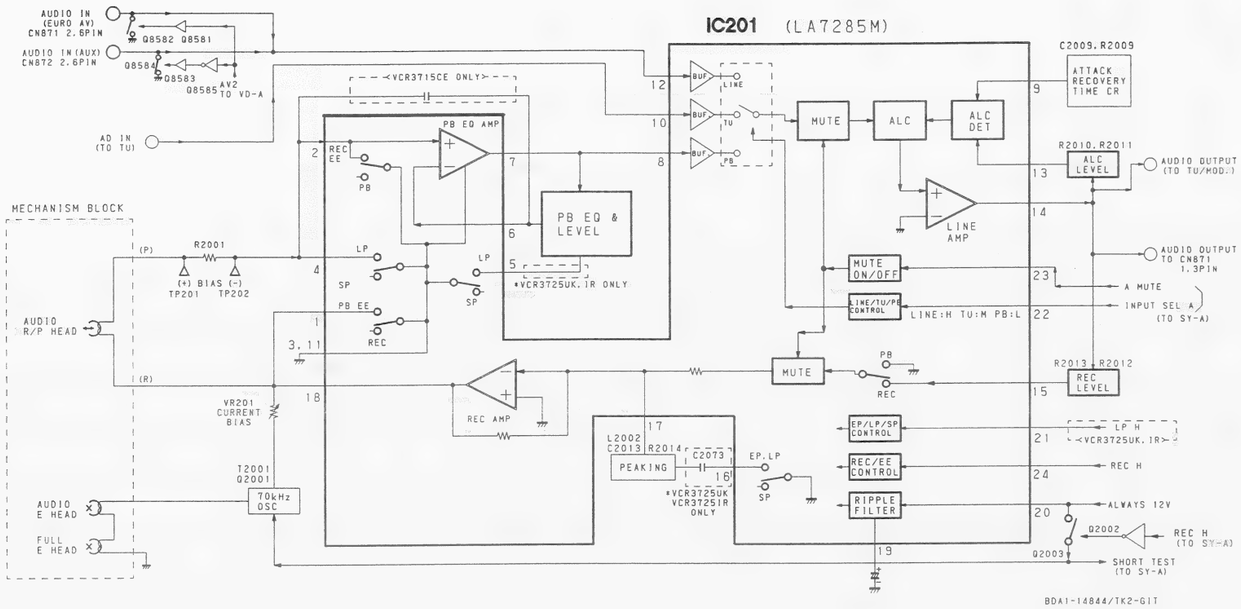
1-4. SYSTEM CONTROL & SERVO CIRCUIT



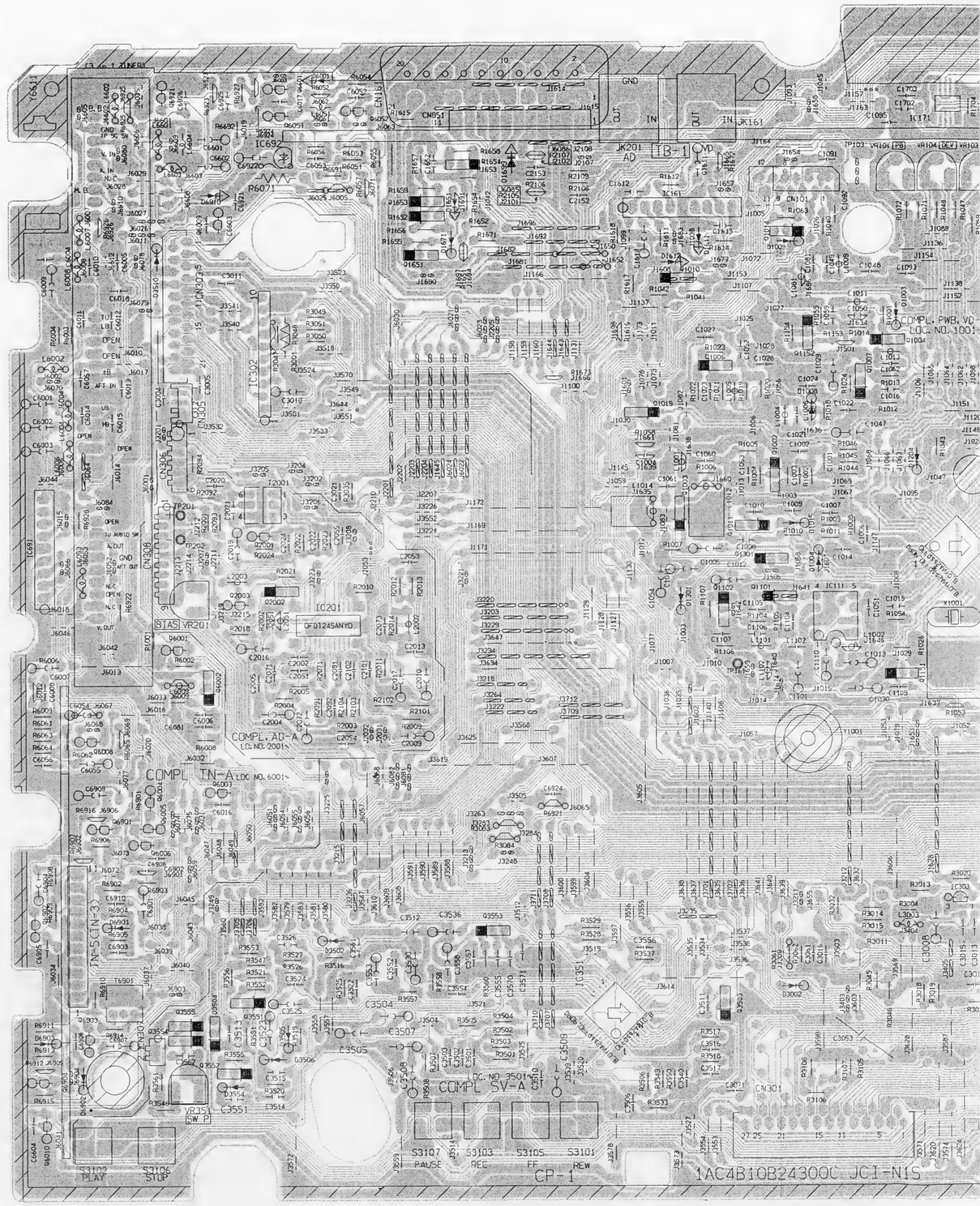
1-4. SYSTEM CONTROL & SERVO CIRCUIT



1-5. AUDIO CIRCUIT

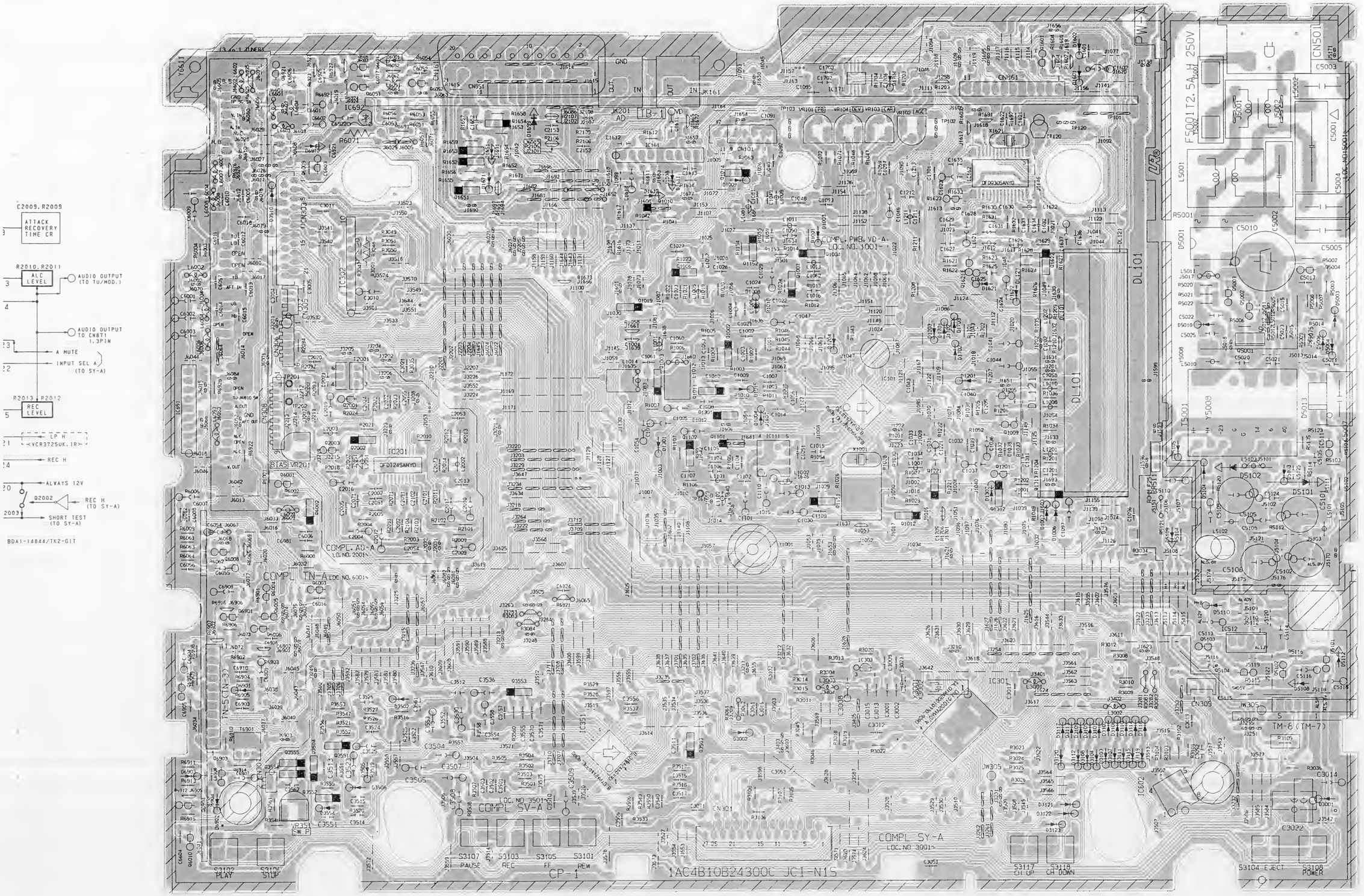


2-1. CP-1 P.W.B.

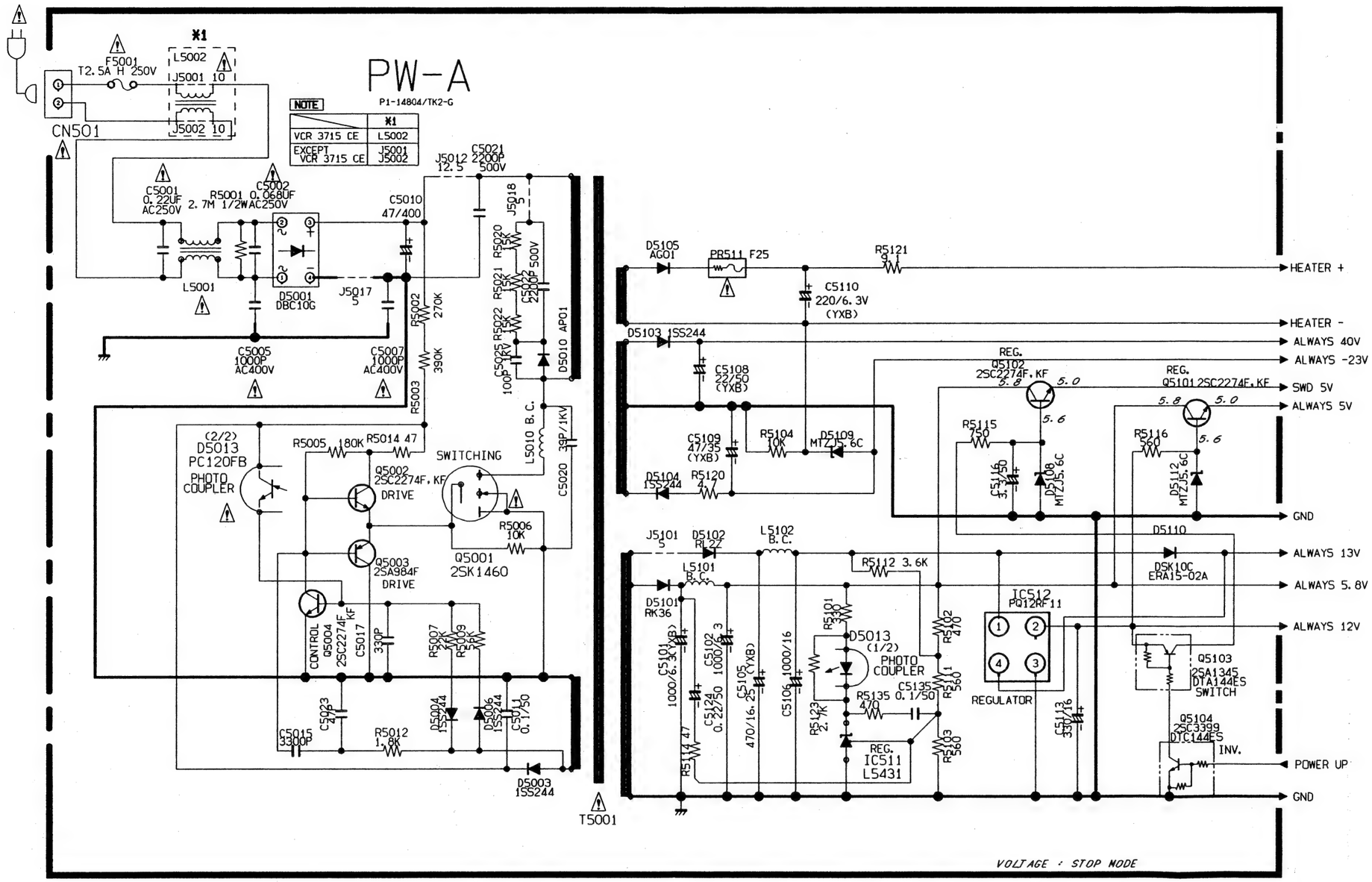


2. CIRCUIT DIAGRAMS & PRINTED WIRING BOARDS (P.W.B.)

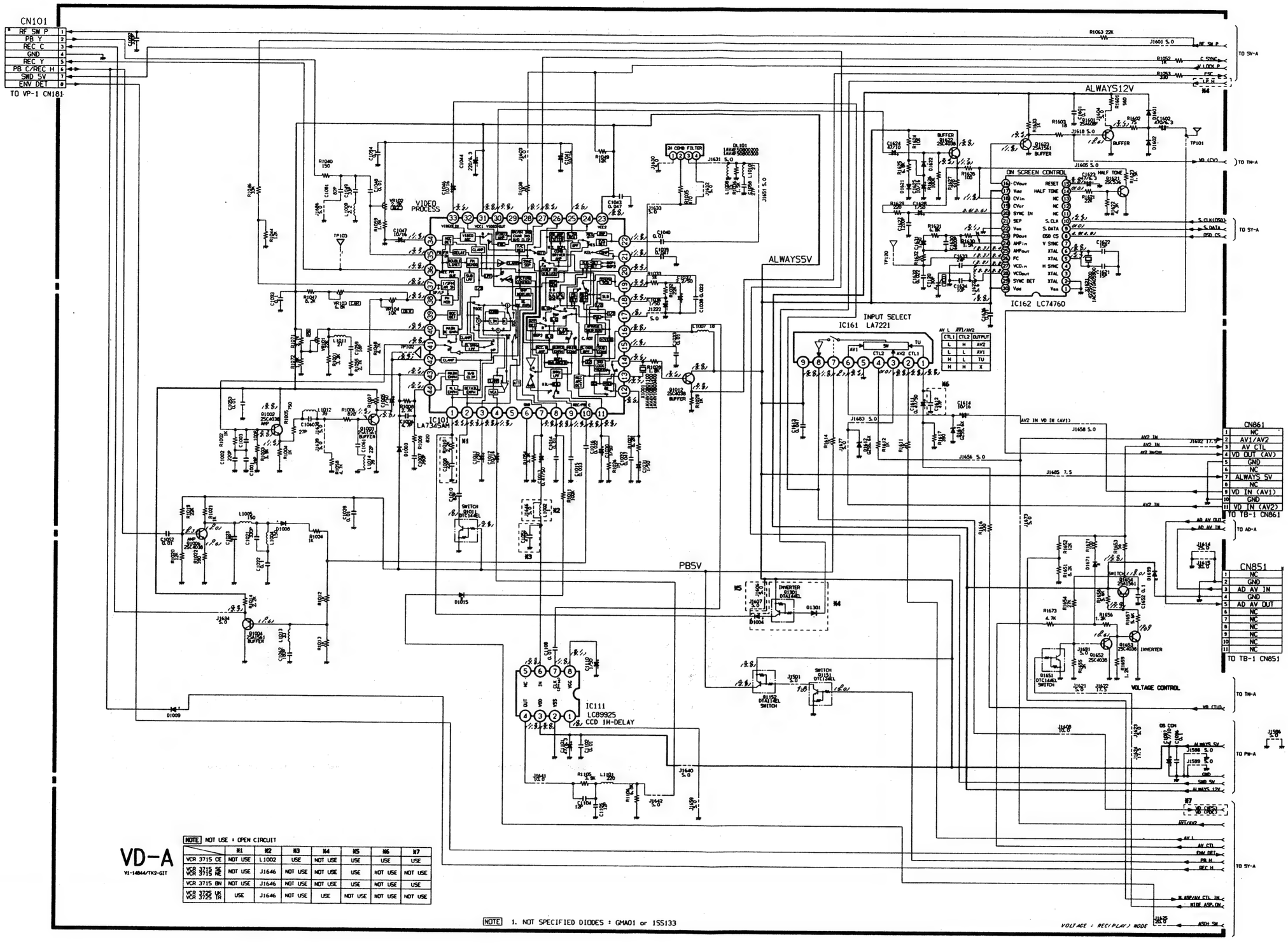
2-1. CP-1 P.W.B.



2-2. CP-1 BOARD (PW-A) POWER SUPPLY



2-3. CP-1 BOARD (VD-A) VIDEO



NOTE NOT USE : OPEN CIRCUIT

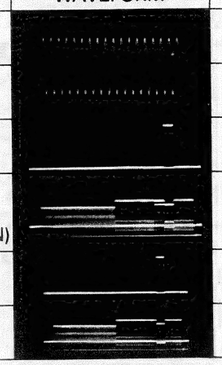
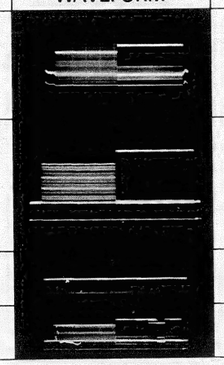
	N1	N2	N3	N4	N5	N6	N7
VCR 3715 CE	NOT USE	L1002	USE	NOT USE	USE	USE	USE
VCR 3715 RC VCR 3715 RE	NOT USE	J1646	NOT USE	NOT USE	USE	NOT USE	NOT USE
VCR 3715 BN	NOT USE	J1646	NOT USE	NOT USE	USE	NOT USE	USE
VCR 3725 VK VCR 3725 YG	USE	J1646	NOT USE	USE	NOT USE	NOT USE	NOT USE

NOTE 1. NOT SPECIFIED DIODES : GMA01 or 1SS133

VOLTAGE : REC(PLAY) MODE

2-4. ON SCREEN (IC162) WAVEFORMS

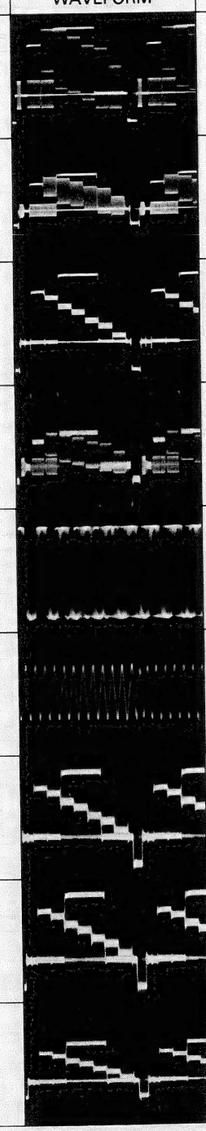
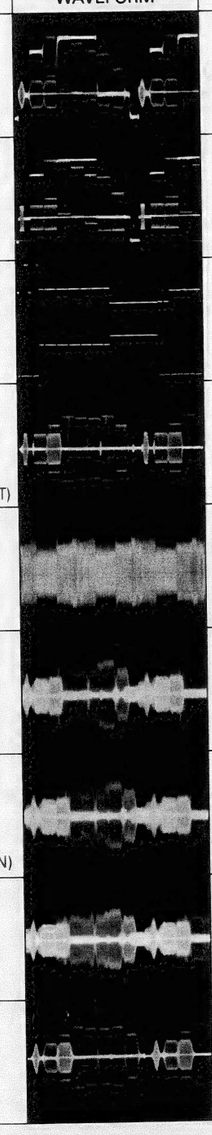
(MODE: REC EE/ON SCREEN)

TEST LOCATION	WAVEFORM	LEVEL	TEST LOCATION	WAVEFORM	LEVEL
Pin 5 (17.7MHz X-TAL)		2Vp-p	Pin 19 (CV cr)		2Vp-p
Pin 6 (17.7MHz X-TAL)		3Vp-p			
Pin 14 (HALF TONE)		5Vp-p	Pin 20 (SYNC IN)		2Vp-p
Pin 16 (VIDEO OUT: WITH ON SCREEN)		2Vp-p			
Pin 14 (HALF TONE)		5Vp-p	Pin 23 (PD OUT)		4.5Vp-p
Pin 18 (VIDEO IN)		2Vp-p	Pin 16 (VIDEO OUT)		2Vp-p

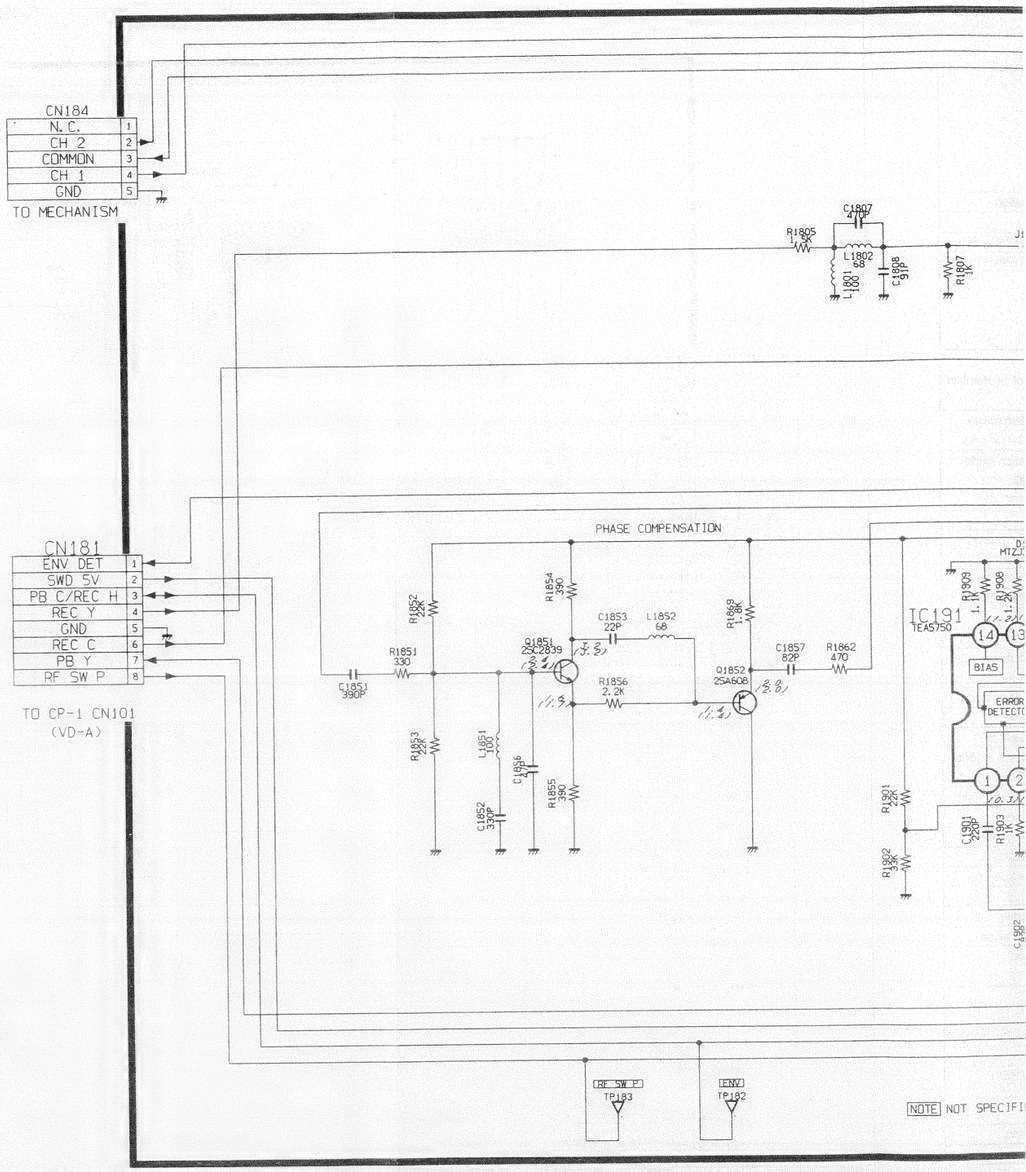
WF-UFO-TP4

2-5. VIDEO CIRCUIT WAVEFORMS

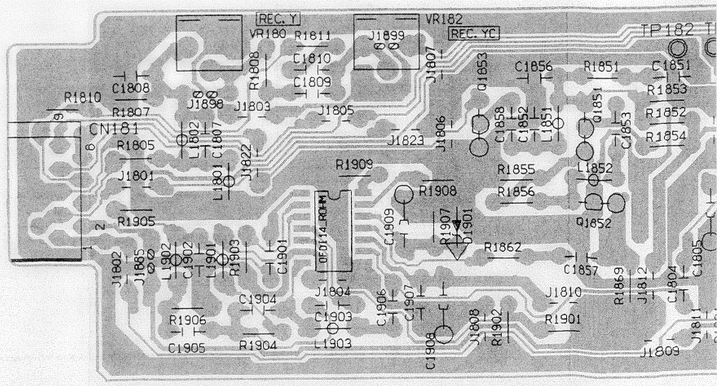
WF-V-TP

TEST LOCATION	WAVEFORM	MODE/LEVEL	TEST LOCATION	WAVEFORM	MODE/LEVEL
IC101 Pin 33 (VIDEO IN)		REC, EE 1 Vp-p	IC101 Pin 30 (VIDEO OUT)		PB 2.5 Vp-p
IC101 Pin 41		REC, EE 0.6 Vp-p	IC101 Pin 30 (VIDEO OUT)		REC, EE 2 Vp-p
IC101 Pin 42		REC, EE 0.5 Vp-p	IC101 (UPPER) Pin 30 (LOWER) Pin 28		STILL (UPPER) 2 Vp-p (LOWER) 5 Vp-p
IC101 Pin 43		REC, EE 1.2 Vp-p	IC101 Pin 10 (REC CHROMA OUT)		REC, EE 0.4 Vp-p
IC101 Pin 36 (REC FM OUT)		REC, EE 1.0 Vp-p	Q1006 Base (PB CHROMA)		PB 0.3 Vp-p
IC101 Pin 35 (PB FM IN)		PB 0.3 Vp-p	Q1007 Emitter (PB CHROMA)		PB 0.2 Vp-p
IC101 Pin 41		PB 0.5 Vp-p	IC101 Pin 10 (PB CHROMA IN)		PB 0.2 Vp-p
IC101 Pin 42		PB 0.5 Vp-p	IC101 Pin 20		PB 1.0 Vp-p
IC101 Pin 7/4		PB 0.3 Vp-p	IC101 Pin 26		PB 0.6 Vp-p

2-6. VP-1 BOARD VIDEO PRE-A



2-7. VP-1 P.W.B.



N SCREEN)

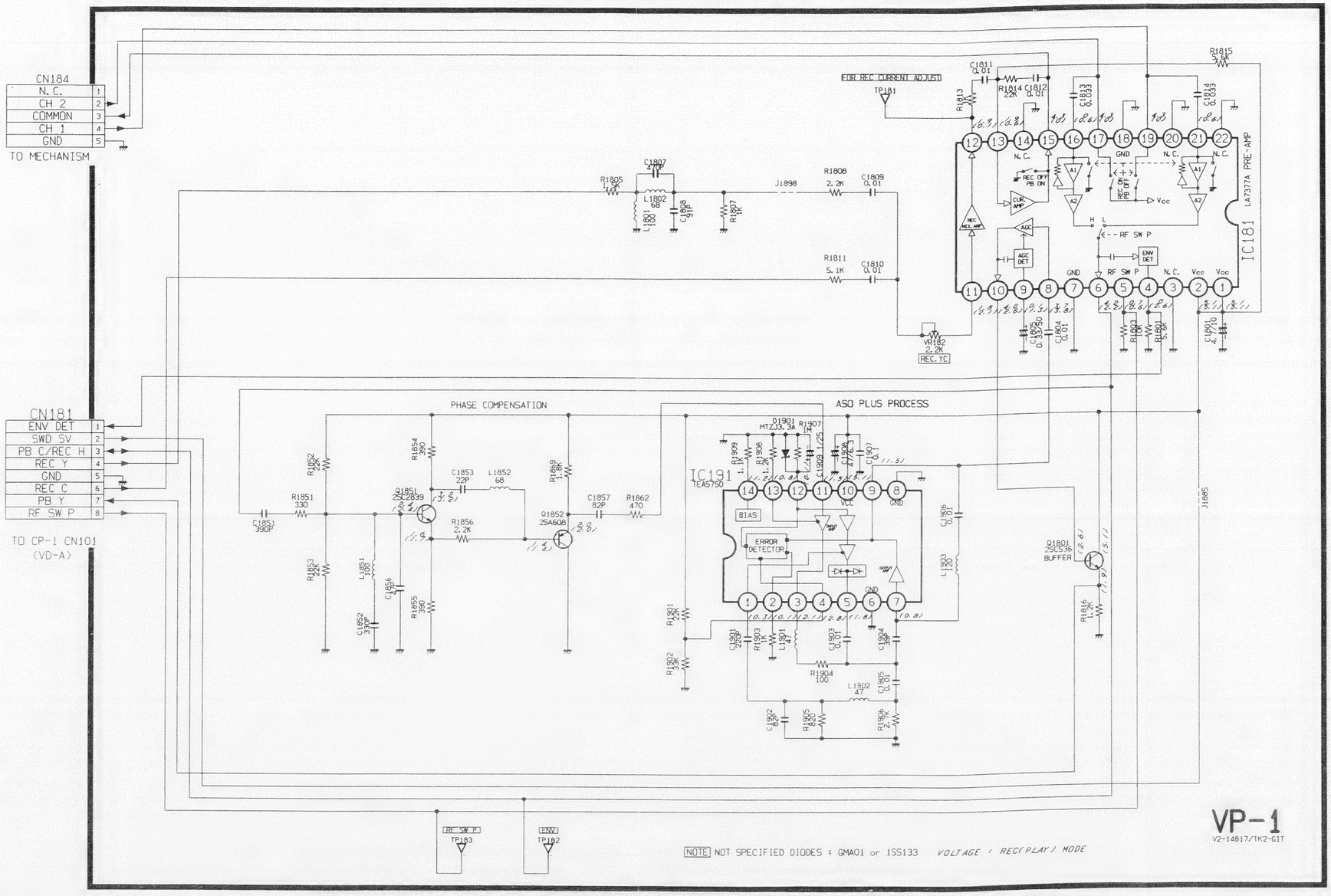
LEVEL
2Vp-p
2Vp-p
5Vp-p
2Vp-p

F-UFO-TP4

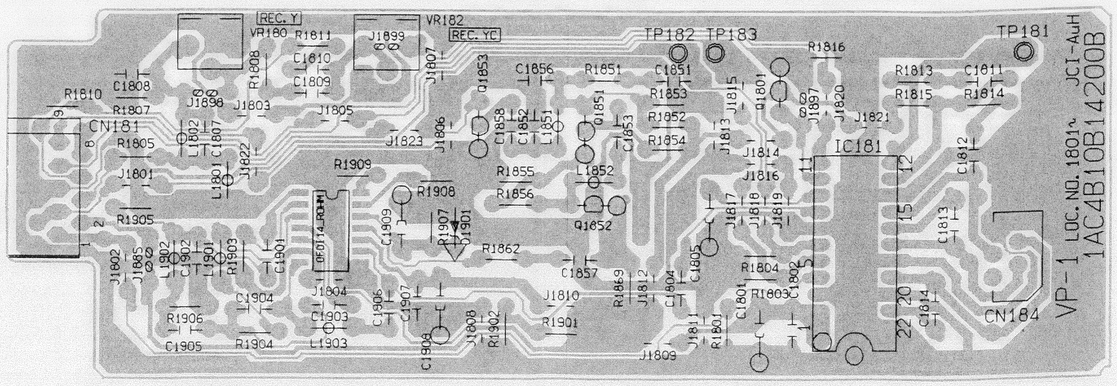
WF-V-TP

LEVEL

2-6. VP-1 BOARD VIDEO PRE-AMP



2-7. VP-1 P.W.B.



9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

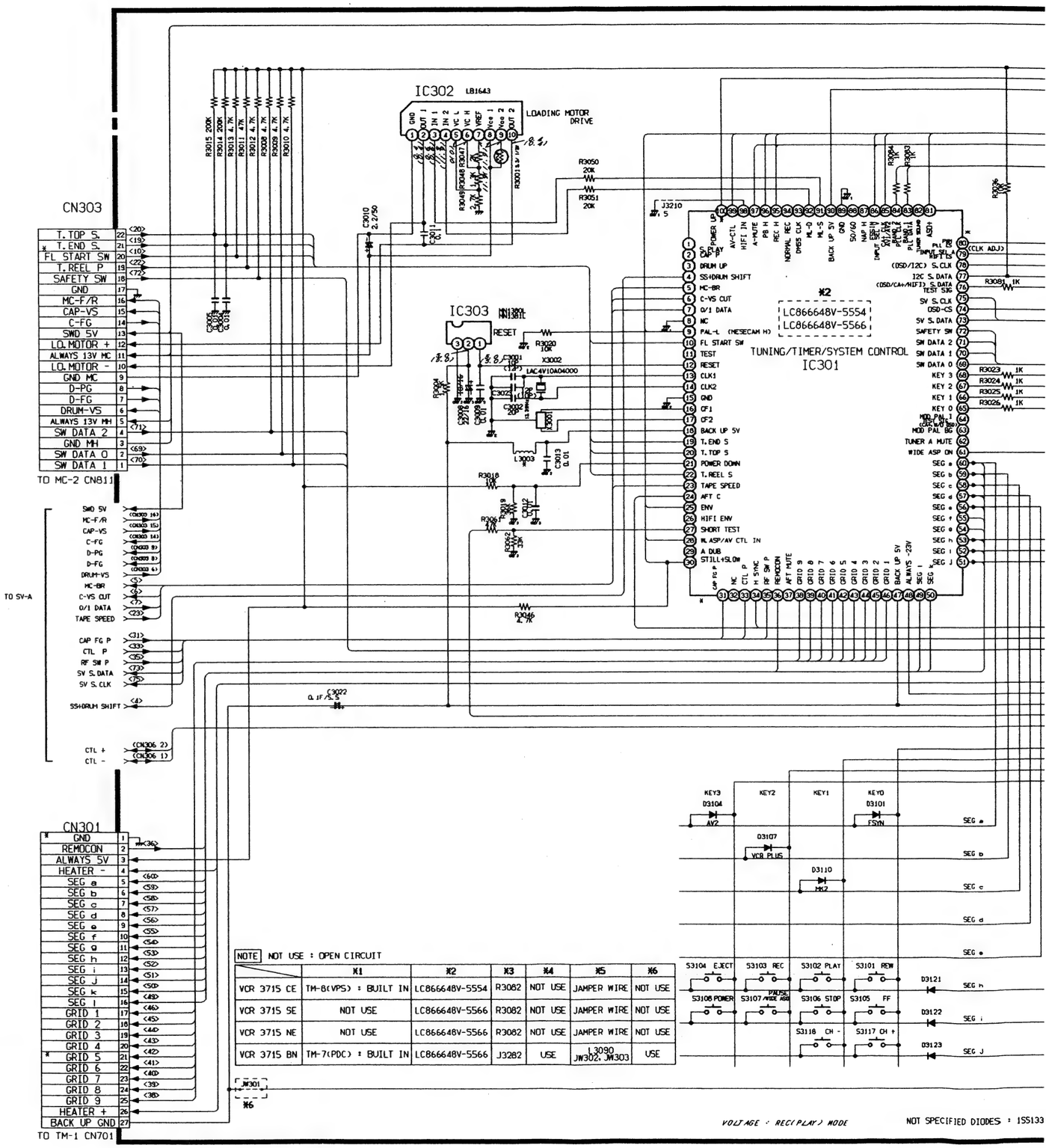
2-8. IC301 SYSTEM CONTROL,TIMER, & TUNING CONTROL MPU PIN FUNCTIONS TABLE

No.	Name	I/O	I/O Signal Function
1	S - PLAY	O	Signal for indicating CUE , REV , STILL and SLOW modes.
2	CAP P.	O	Gain down control for Head Motor Amplifier at SLOW mode.
3	DRUM UP	O	Head drum motor rotation speed up signal.
4	SS + DRUM SHIFT	O	Signal for indicating SLOW/STILL modes and alternation of drum motor control data. (3 value voltage)
5	MC - BR	O	Brake signal for capstan motor.
6	C - Vs CUT	O	Cut off for capstan motor control voltage in SLOW / STILL modes.
7	0 / 1 DATA	I	CTL pulse duty detection signal input. Used for VISS detection.
8	-	-	-
9	PAL- L(MESECAM H)	I	Color system indication signal input.
10	FL- START SW	I	Switch input indicating start of cassette loading or discharge by cassette mechanism.
11	-	-	-
12	RESET	I	Initial reset terminal for this IC.
13	CLK 1	-	Clock OSC during power failures.
14	CLK 2	-	Frequency is 32.768kHz.
15	VSS	-	Ground terminal
16	CF 1	-	IC clock OSC terminal.
17	CF 2	-	Frequency is 13.31MHz.
18	VDD	-	IC power supply terminal.(5Vdc)
19	T. END S.	I	Sensor signal input for tape end detection.
20	T. TOP S.	I	Sensor signal input for tape beginning detection.
21	POWER DOWN	I	Power failure detection terminal.
22	T. REEL S.	I	Pulse input for detection of take-up reel table rotation.
23	TAPE SPEED	I	Input of result of tape speed discrimination by digital servo IC.
24	AFT - C	I	Tuner AFT S-curve signal input for tuner AFT control.
25	ENV.	I	Video head envelope detection signal input for ATR function.
26	HIFI ENV.	I	Hi-Fi audio head envelope detection signal input for ATR function. (Hi-Fi model only)
27	SHORT TEST	I	REC mode indication signal input (REC 5V).
28	W. ASP/ AV CTL IN	I	AV source selection signal input from AV terminal.
29	A DUB	O	Signal for indicating audio dubbing mode.
30	STILL + SLOW	O	STILL or SLOW modes indication signal output.
31	C - FG P.	I	FG signal input of capstan motor.
32	-	-	-
33	CTL P.	I	CTL head recording / playback pulse signal input.
34	H SYNC	I	Sync. signal input for existing channel discrimination and TV system discrimination.
35	RF SW P.	I	RF switching pulse input, created by head drum PG.
36	REMOCON	I	Remote control signal input.
37	AFT MUTE	O	"H" output during TU AFT mute. (V-syn model only)
38	G9	O	Display grid outputs (FLD).
39	G8	O	
40	G7	O	
41	G6	O	
42	G5	O	
43	G4	O	
44	G3	O	
45	G2	O	
46	G1	O	
47	VDD	-	IC power supply input.(5Vdc)
48	V LOAD	O	-23V input for FLD drive.
49	SEG I	O	Display segment outputs (FLD). (Includes key-scan output)
50	SEG k	O	
51	SEG j	O	
52	SEG i	O	
53	SEG h	O	
54	SEG g	O	
55	SEG f	O	Display segment outputs (FLD). (Includes key-scan output)
56	SEG e	O	
57	SEG d	O	
58	SEG c	O	
59	SEG b	O	
60	SEG a	O	
61	WIDE ASP ON	O	Signal for wide aspect TV-system indication.
62	TUNER A MUTE	O	Signal for disable tuner-audio output.
63	RF PAL BG	O	Signal for RF output TV-system setting (PAL - BG).
64	RF PAL I	O	Signal for RF output TV-system setting (PAL - I).
65	KEY IN 0	I	Operation key data inputs.
66	KEY IN 1	I	
67	KEY IN 2	I	
68	KEY IN 3	I	
69	SW DATA 0	I	3-bit data indicating operation position of mechanism.
70	SW DATA 1	I	
71	SW DATA 2	I	
72	SAFETY SW	I	Terminal for accidental erasure prevention switch. No operation to record mode while "HIGH" is input.
73	SV S. DATA	O	Output 8-bit X 4 serial data giving operation mode and tracking data,etc., to digital servo IC.
74	OSD CS	O	Chip enable (access) signal output to OSD IC.
75	SV S. CLK	O	The clock pulse for digital servo IC.
76	S. DATA (OSD / CH+ / Hi-Fi)	I/O	Terminal for communication of respective data with OSD IC, CH+ control IC, and Hi-Fi audio IC.
77	I2C S.DATA	I/O	Data exchange with tuning memory IC and VPS IC.
78	S. CLK (OSD/I2C)	O	The clock pulse for OSD IC and tuning memory IC.
79	INPUT SEL A	O	Signal for selecting audio input source.
	HIFI CS	O	Chip enable (access) signal to Hi-Fi audio IC.
80	PLL CS	O	Chip enable signal output to tuner PLL tuning system IC. (F-syn model)
	TU PWM	O	Tuning voltage output (PWM signal). (V-syn model)
81	-	-	-
82	TU SOUND (I/BG)	O	TV system indication signal output (PAL I or BG).
83	BAND 1	O	Tuning band data(BAND 1 and 2 ; for V-syn model).
	PLL DATA	O	Data exchange with tuner PLL IC (for F-syn model).
84	BAND 2	O	BAND 1 and 2 ; (L,L)=VHF-LOW (L,H)=VHF-HIGH (H,L)=UHF (H,H)=SKIP. (for V-syn model)
	PLL CLK	O	The clock for PLL IC of tuner unit (for F-syn model).
85	CH+ CLK	O	The clock for CH+ input/output source selection IC.
	AV1 / AV2	O	Signal for selecting AV-input (video/audio) source.
86	INPUT SEL V	O	Signal for selecting video input source.
	FSS IN	I	CH+ mode control signal input (CH+ model).
87	NAP H	O	" H " output during NTSC (NAP) playback mode.
88	50 / 60	O	" LOW " output during NTSC (NAP) mode. (60 field mode)
89	VSS	-	IC ground terminal.
90	VDD	-	IC power supply input.(5Vdc)
91	ML- S	O	Loading motor rotation speed (low / medium / high) indication signal.
92	ML- D	O	Loading motor rotation direction (FWD / REV) indication signal.
93	-	-	-
94	NORMAL AD REC	O	Signal for indicating normal audio recording.
95	REC H	O	Signal for indicating recording mode.
96	PB H	O	Signal for indicating playback mode.
97	A MUTE	O	"H" output for disable audio output signal.
98	HIFI IN	I	Hi-Fi mode indication signal input from audio IC.
99	AV CTL	O	AV terminal (pin8 of 21pins AV socket) control signal output.
	ANT / VTR	O	Selection the RF source of ANTENNA or VTR.
100	POWER UP	O	"HIGH" output except when power is off. Indicating that power is ON.

TK14HTTS-A

2-9. CP-1 BOARD (SY-A) SYSTEM CONTROL (VCR 3715 s

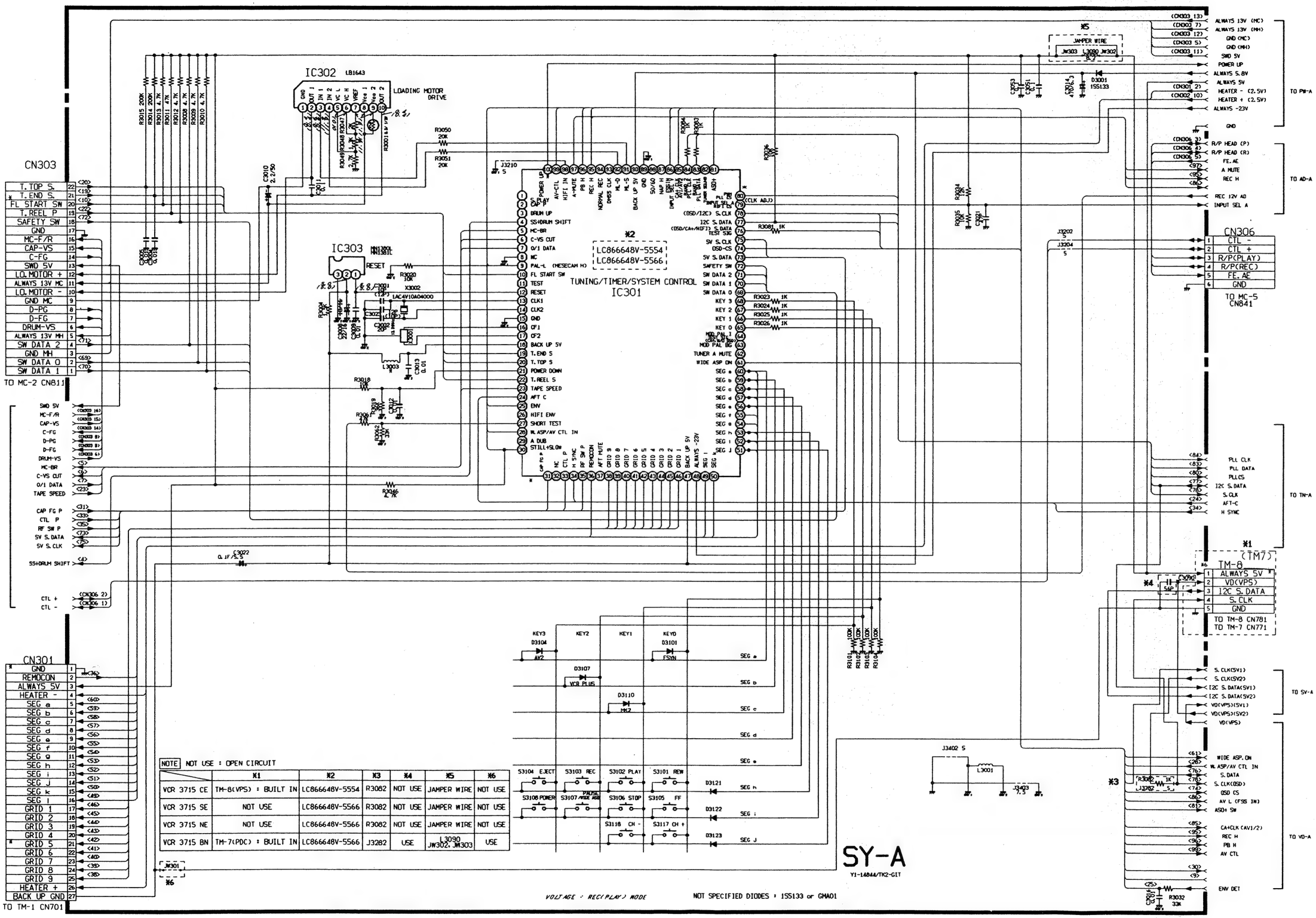
Note:The SY-A circuit diagram for the model VCR 3725 seri



	X1	X2	X3	X4	X5	X6
VCR 3715 CE	TM-8(VPS) : BUILT IN	LC866648V-5554	R3082	NOT USE	JAMPER WIRE	NOT USE
VCR 3715 SE	NOT USE	LC866648V-5566	R3082	NOT USE	JAMPER WIRE	NOT USE
VCR 3715 NE	NOT USE	LC866648V-5566	R3082	NOT USE	JAMPER WIRE	NOT USE
VCR 3715 BN	TM-7(PDC) : BUILT IN	LC866648V-5566	J3282	USE	L3090 JW302, JW303	USE

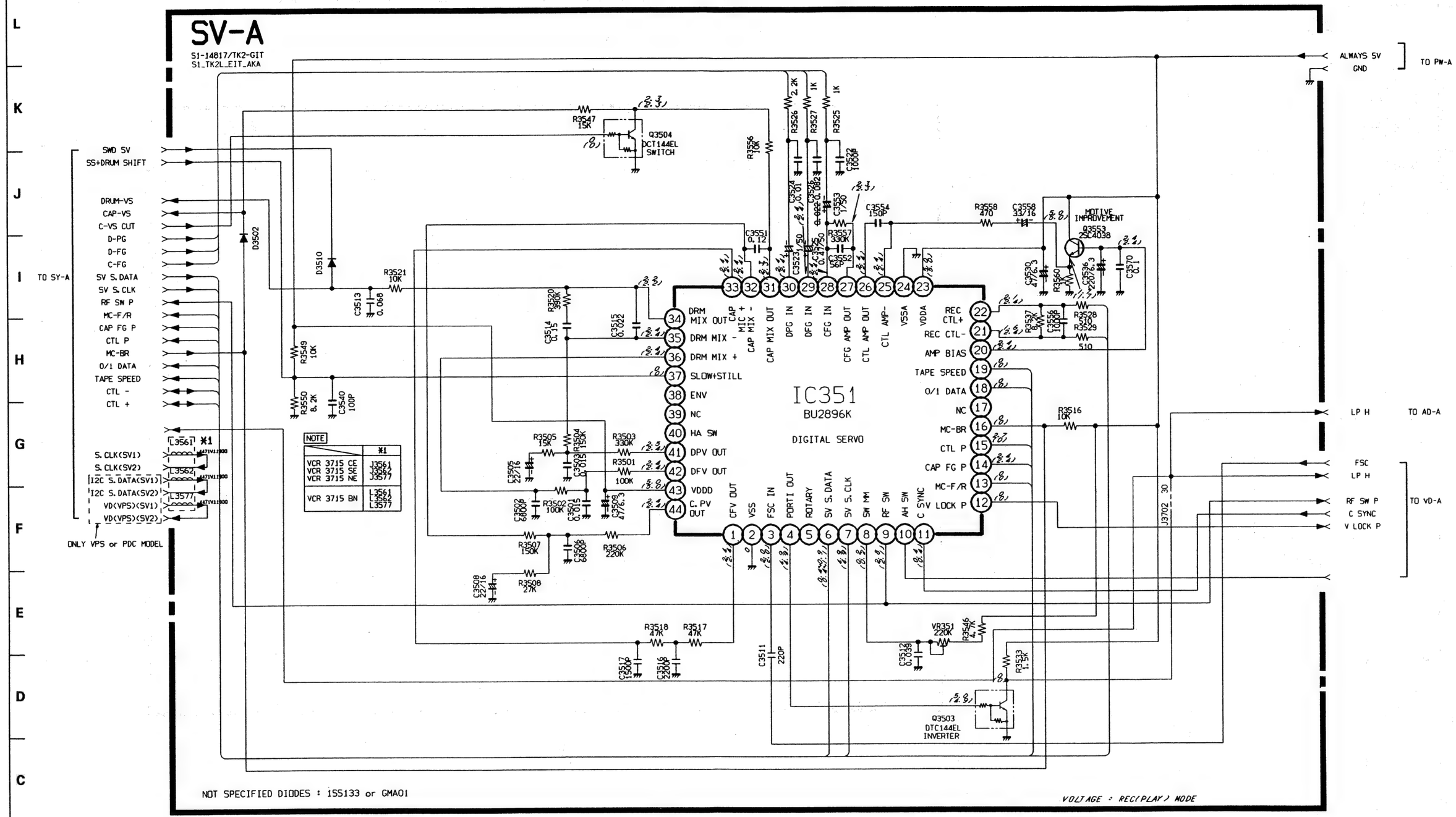
2-9. CP-1 BOARD (SY-A) SYSTEM CONTROL (VCR 3715 series)

Note:The SY-A circuit diagram for the model VCR 3725 series is shown in page 36.



NOTE NOT USE : OPEN CIRCUIT						
	*1	*2	*3	*4	*5	*6
VCR 3715 CE	TM-8(VPS) : BUILT IN	LC866648V-5554	R3082	NOT USE	JAMPER WIRE	NOT USE
VCR 3715 SE	NOT USE	LC866648V-5566	R3082	NOT USE	JAMPER WIRE	NOT USE
VCR 3715 NE	NOT USE	LC866648V-5566	R3082	NOT USE	JAMPER WIRE	NOT USE
VCR 3715 BN	TM-7(PDC) : BUILT IN	LC866648V-5566	J3282	USE	L3090 JW302, JW303	USE

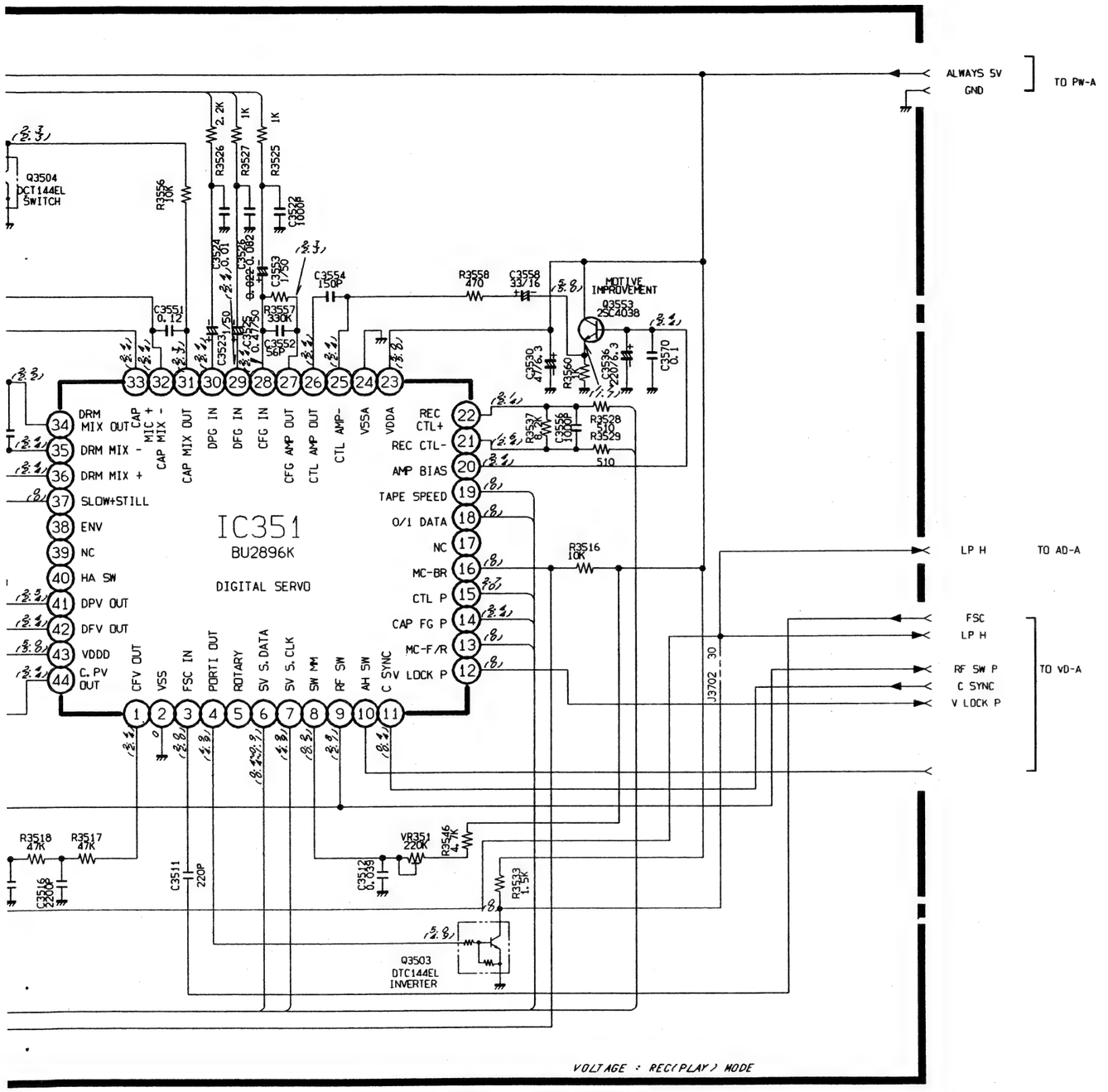
2-10. CP-1 BOARD (SV-A) SERVO



NOTES:

——— : Common parts for VCR 3715 series and VCR 3725 series

——— : The parts for VCR 3725 series only

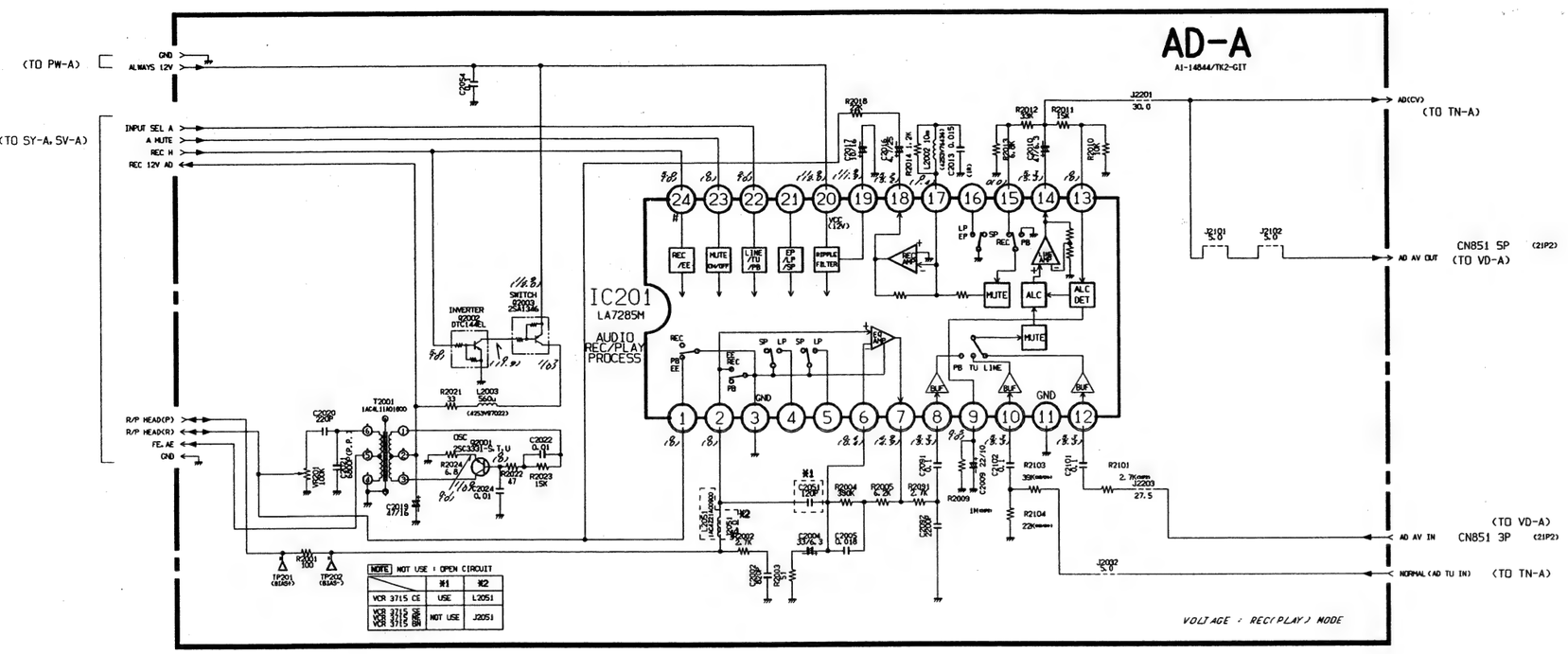


2-11. SERVO CIRCUIT WAVEFORMS (IC351:BU2896 Series)

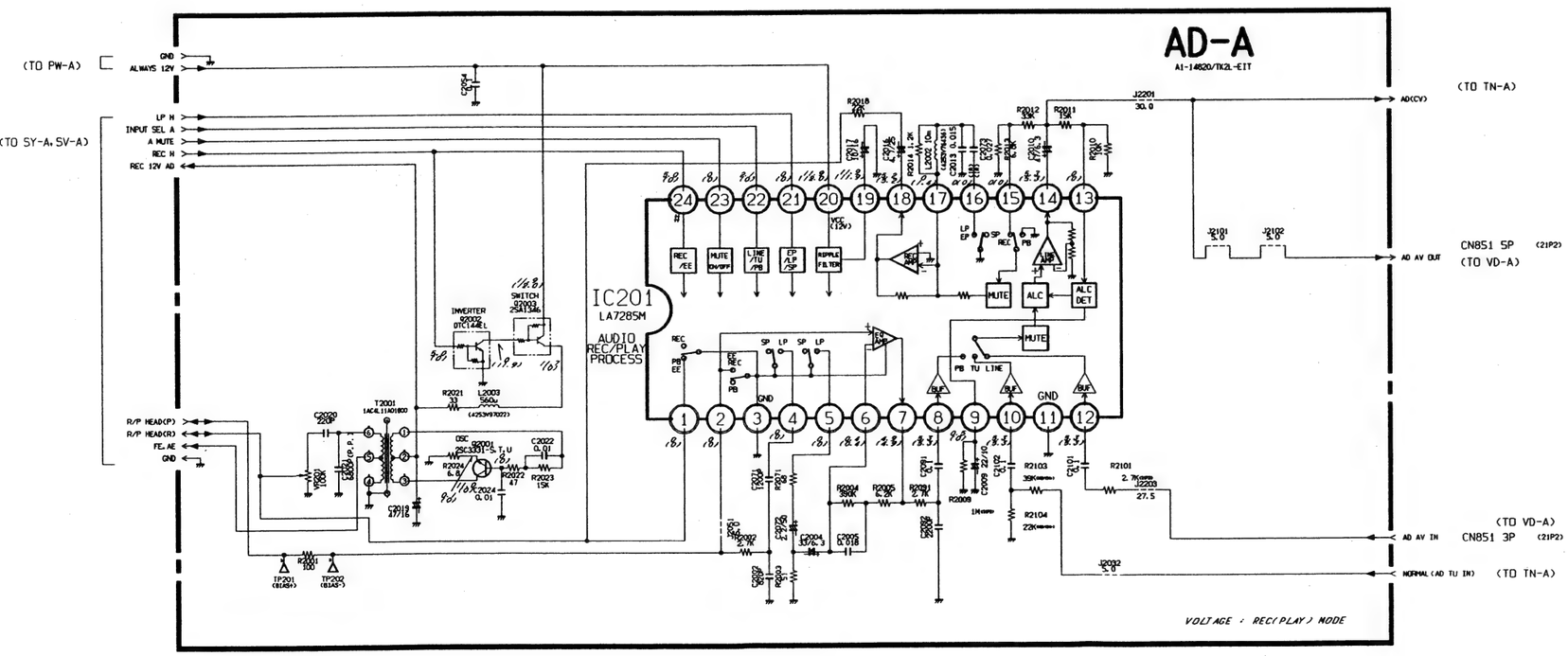
TEST LOCATION	WAVEFORM & MODE/LEVEL	TEST LOCATION	WAVEFORM & MODE/LEVEL
Pin 40 (H.A.SWITCHING)	SLOW PB, 5.0V, 20msec 20msec	**Pin 11** (COMPOSITE SYNC INPUT)	T=20msec, 4.2V
Pin 42 (PWM)	5.0V, 8.66KHz	**Pin 14** (C-FG PULSE)	5.0V, 1513Hz
Pin 41,44,1 (PWM)	5.0V, 69.27KHz	**Pin 15** (CTL PULSE)	PB, 850µsec, 5.0V, 40msec
Pin 3 (FSC INPUT)	0.3Vp-p, 4.43MHz	**Pin 26** (CTL AMP OUT)	PB, 2.0Vp-p, 40msec
Pin 5 (ROTARY)	PB, 5.0V, 20msec 20msec	**Pin 28** (C-FG INPUT)	10mVp-p, 0.66msec
Pin 8 (D-PG MM)	2msec, 2.5V, 7msec	**Pin 29** (D-FG INPUT)	30mVp-p, 1.33msec
Pin 9 (RF SW PULSE)	5.0V, 20msec 20msec	**Pin 30** (D-PG INPUT)	250mVp-p, 40msec
Pin 10 (AF SW PULSE)	PB, 5.0V, 20msec 20msec	**Pin 38** (ENV.SW INPUT)	SLOW PB, 4.0V, 20msec 20msec

WF-S-CE6

2-12. CP-1 BOARD (AD-A) AUDIO (VCR 3715 series)



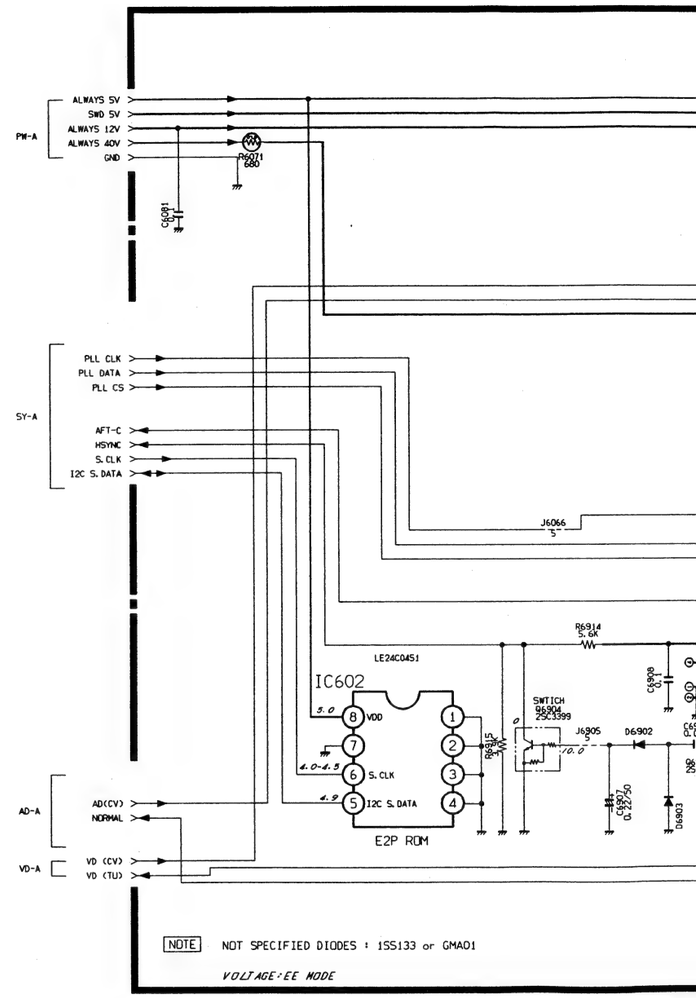
2-13. CP-1 BOARD (AD-A) AUDIO (VCR 3725 series)



2-14. CP-1 BOARD (TN-A) TUNI

Note:The TN-A circuit diagram

Note:The TN-A circuit diagram

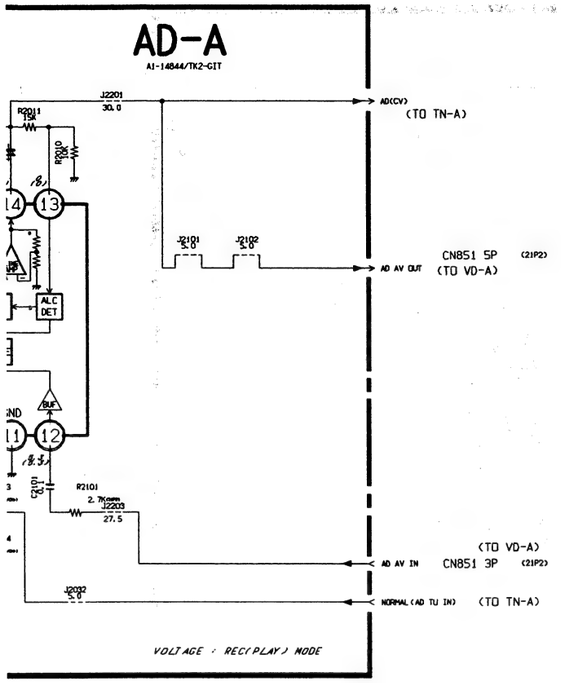


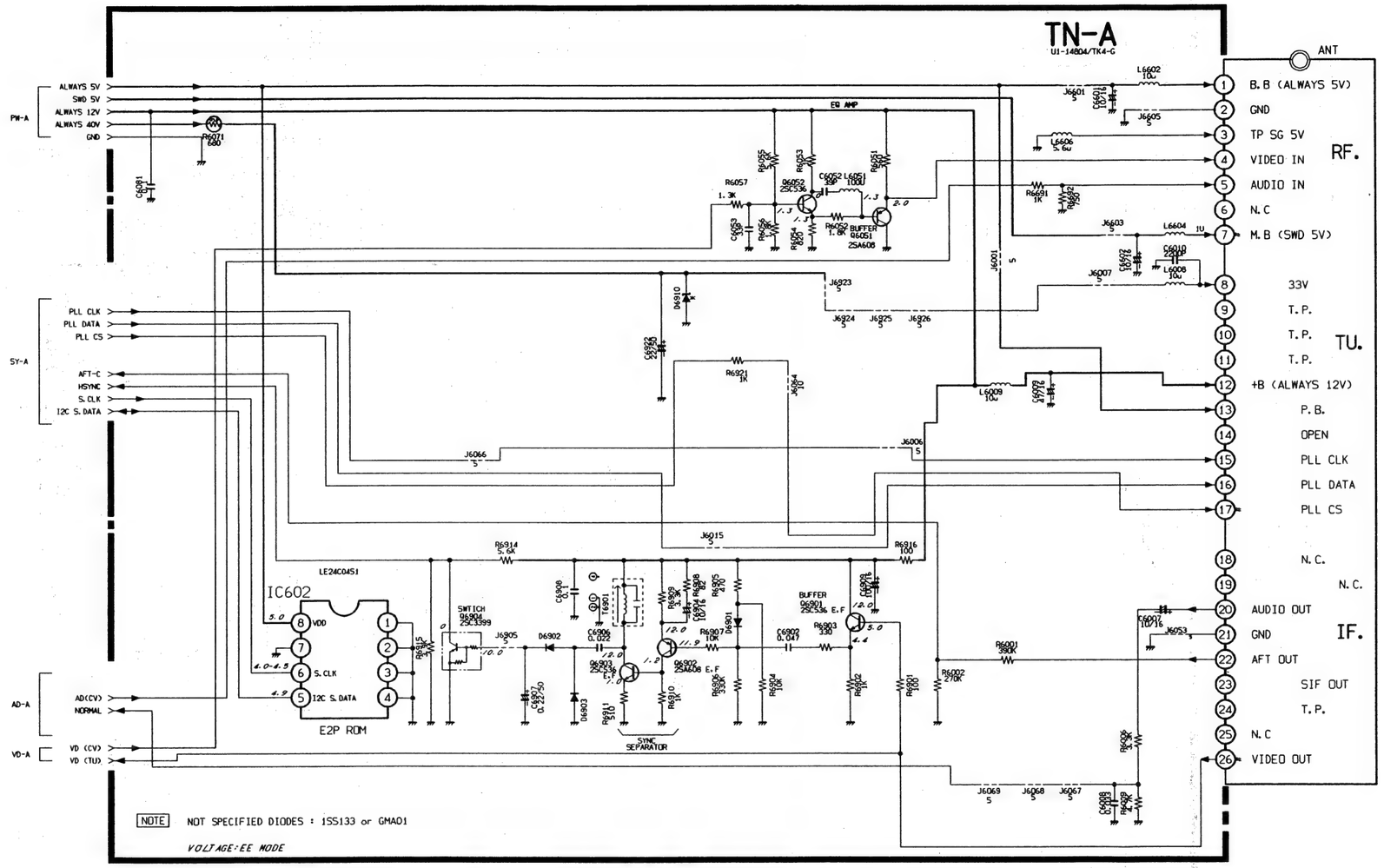
ies)

2-14. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR 3715 CE)

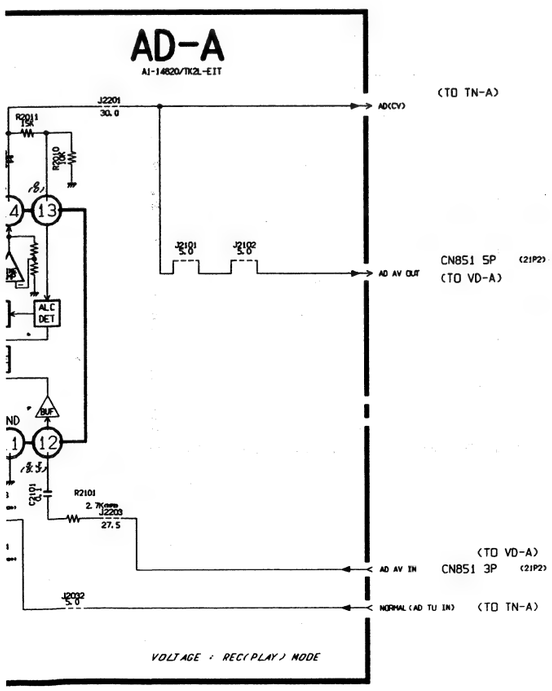
Note:The TN-A circuit diagram for the model VCR 3715 SE,NE,BN is shown in page 38.

Note:The TN-A circuit diagram for the model VCR 3725 series is shown in page 39.



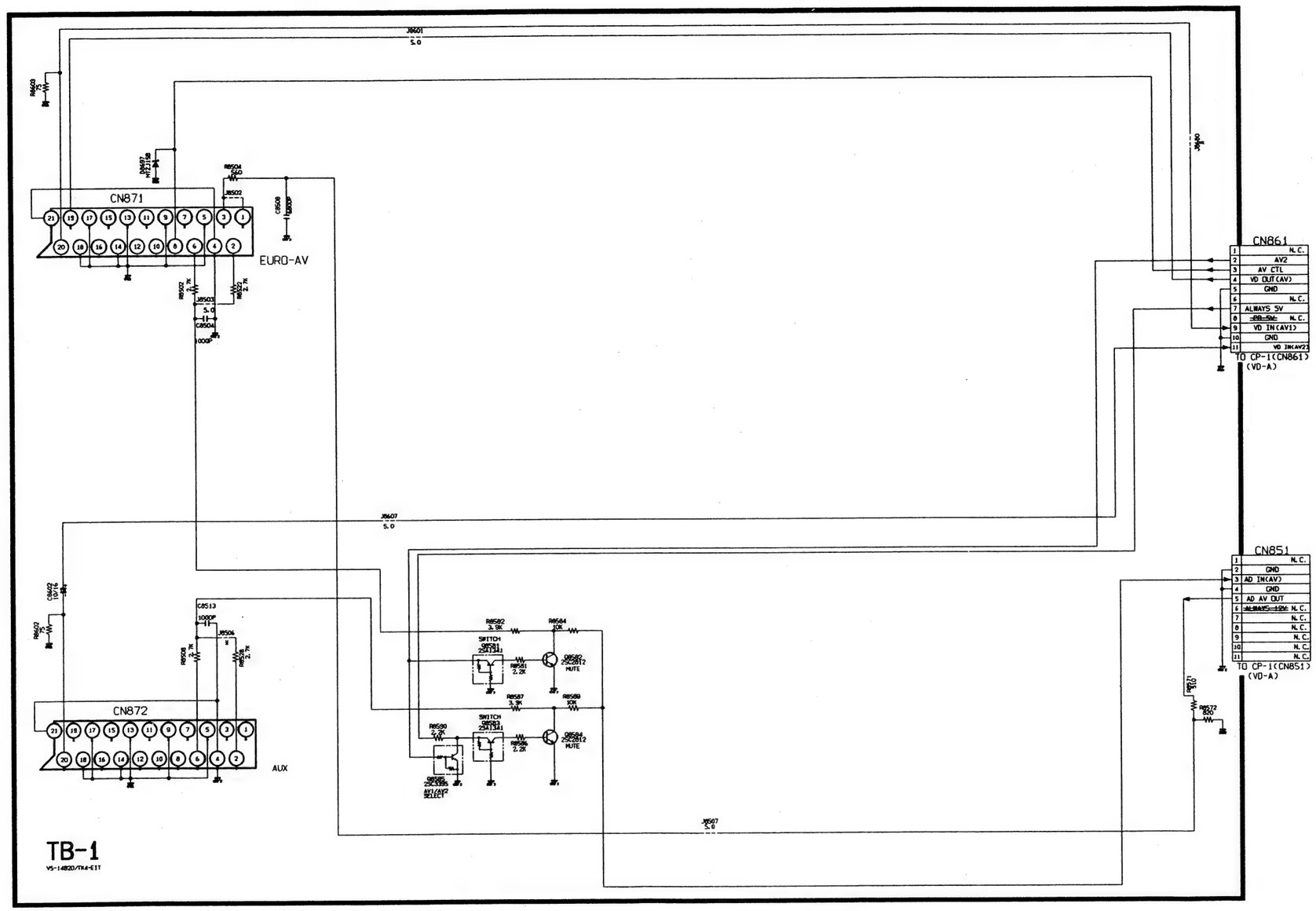


ies)

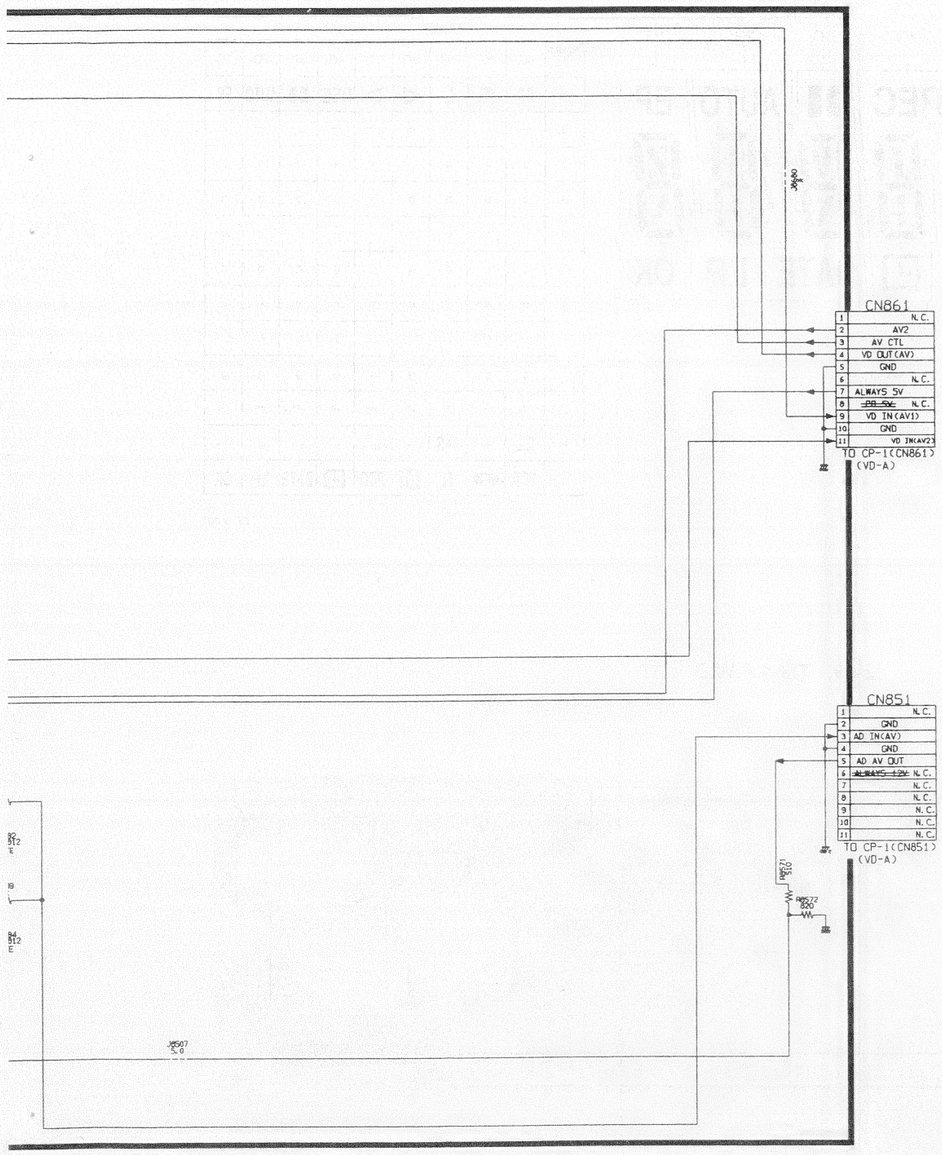


10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

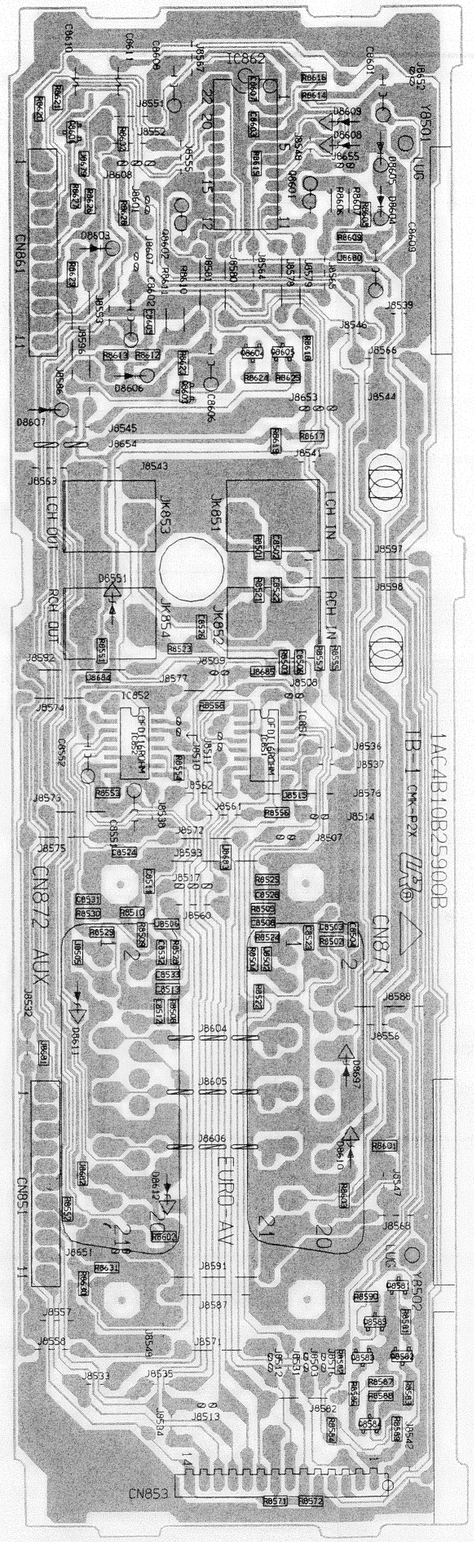
2-15. TB-1 BOARD TERMINAL



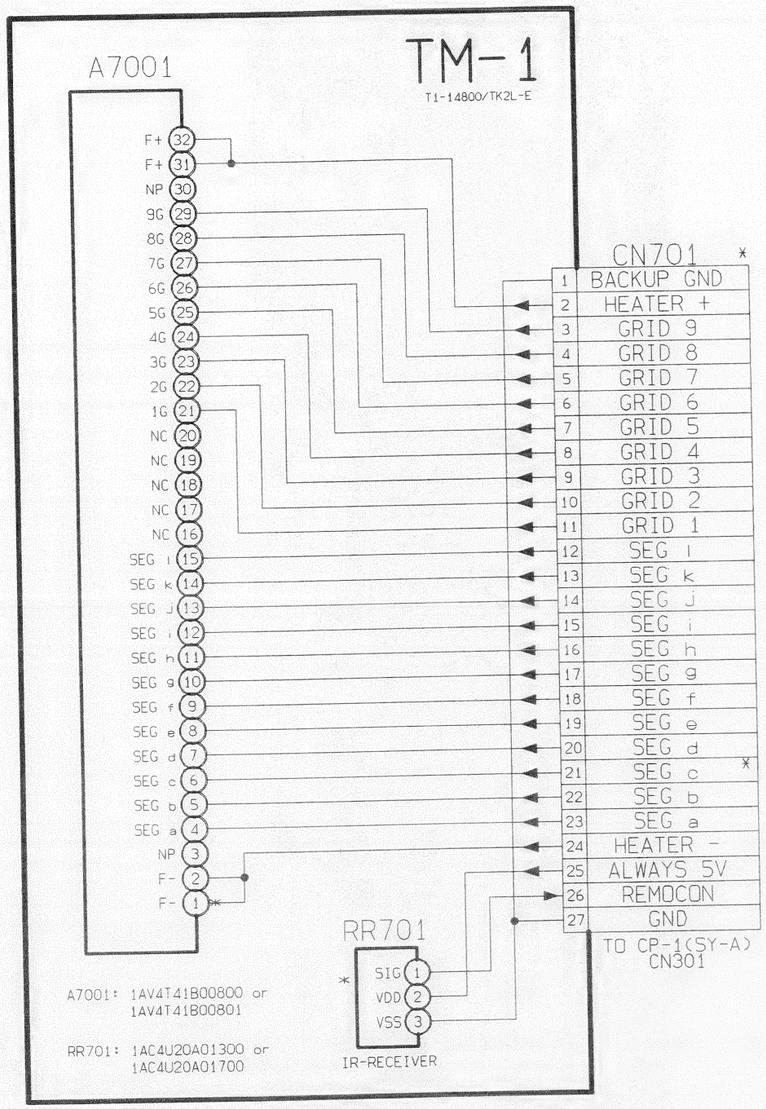
TB-1 BOARD TERMINAL



2-16. TB-1 P.W.B.

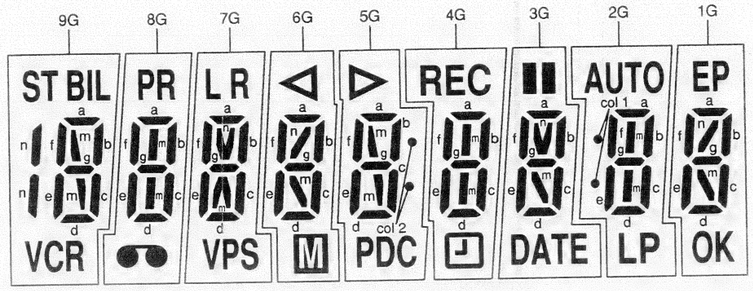


2-17. TM-1 BOARD DISPLAY (FLD)



2-18. A7001 DISPLAY (FLD) GRID/ANODE ASSIGNMENT DRAWING & TABLE

GRID & SEGMENT ASSIGNMENT

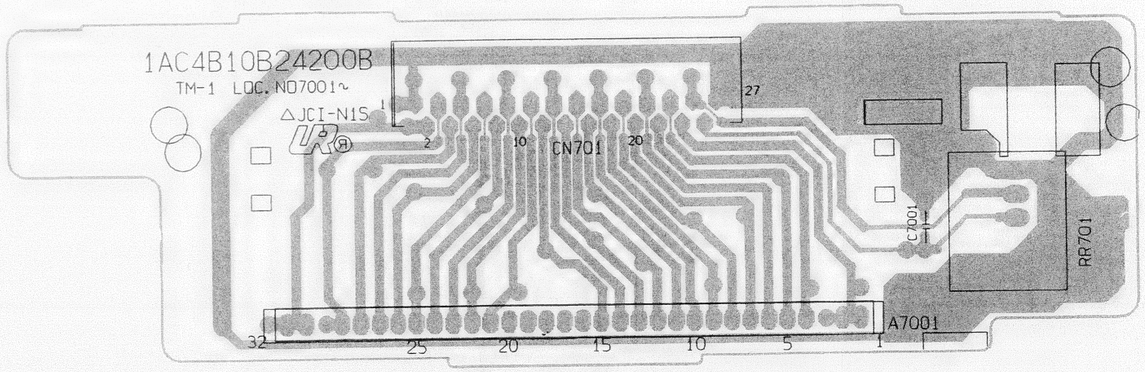


ANODE CONNECTION

GRID / SEGMENT	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	ST	PR	L	◁	▷	REC	▮▮	AUTO	EP
b	n	—	n	n	—	—	n	—	n
c	a	a	a	a	a	a	a	a	a
d	b	b	b	b	b	b	b	b	b
e	c	c	c	c	c	c	c	c	c
f	d	d	d	d	d	d	d	d	d
g	e	e	e	e	e	e	e	e	e
h	f	f	f	f	f	f	f	f	f
i	g	g	g	g	g	g	g	g	g
j	m	m	m	m	m	m	m	m	m
k	BIL	—	VPS	—	col 2	—	—	col 1	—
l	VCR	●●	R	M	PDC	⏎	DATE	LP	OK

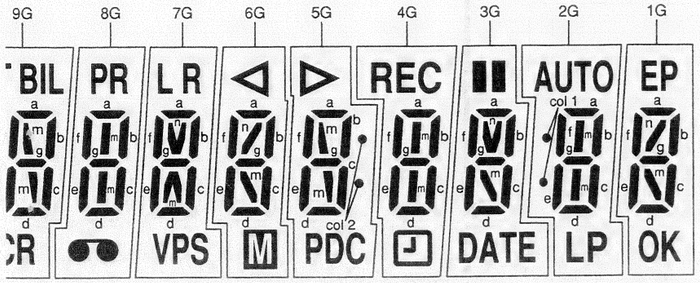
GR-00800

2-19. TM-1 P.W.B.



2-18. A7001 DISPLAY (FLD) GRID/ANODE ASSIGNMENT DRAWING & TABLE

GRID & SEGMENT ASSIGNMENT

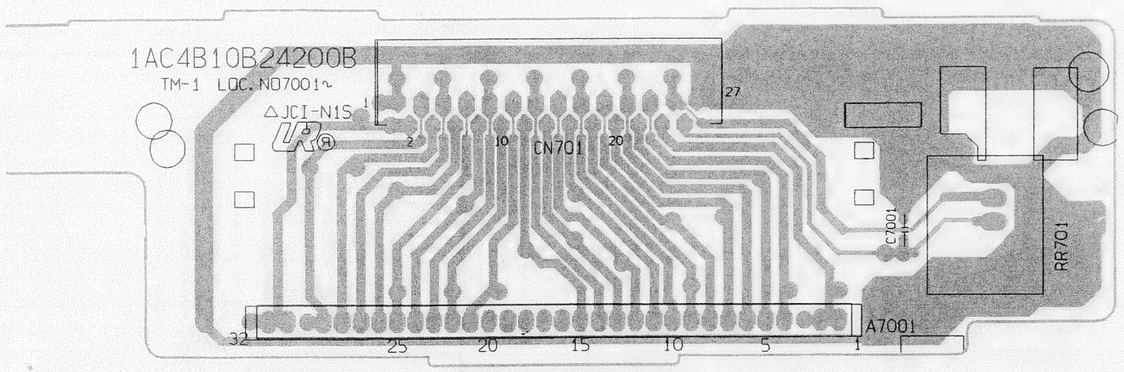


ANODE CONNECTION

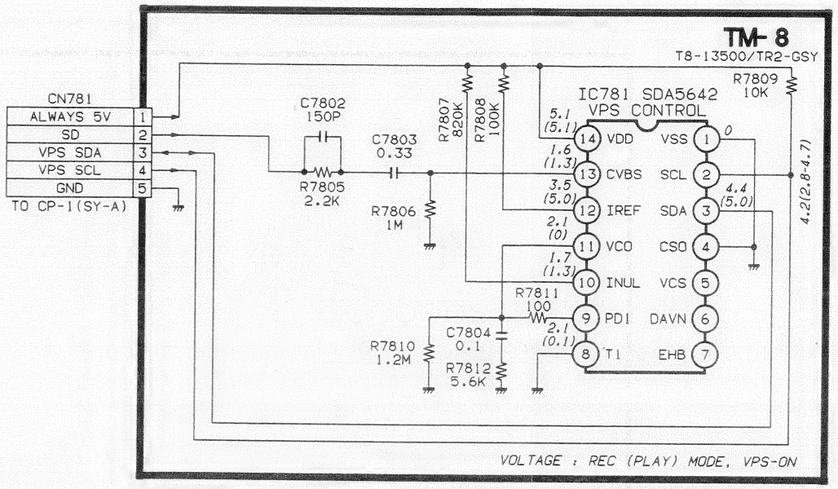
GRID / SEGMENT	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	ST	PR	L	◁	▷	REC	▮▮	AUTO	EP
b	n	—	n	n	—	—	n	—	n
c	a	a	a	a	a	a	a	a	a
d	b	b	b	b	b	b	b	b	b
e	c	c	c	c	c	c	c	c	c
f	d	d	d	d	d	d	d	d	d
g	e	e	e	e	e	e	e	e	e
h	f	f	f	f	f	f	f	f	f
i	g	g	g	g	g	g	g	g	g
j	m	m	m	m	m	m	m	m	m
k	BIL	—	VPS	—	col 2	—	—	col 1	—
l	VCR	👓	R	M	PDC	⏎	DATE	LP	OK

GR-00800

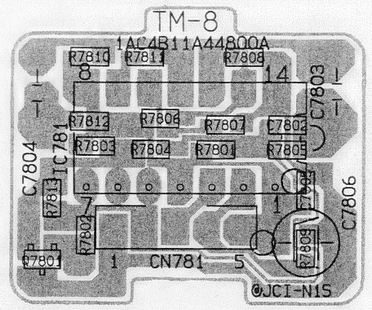
2-19. TM-1 P.W.B.



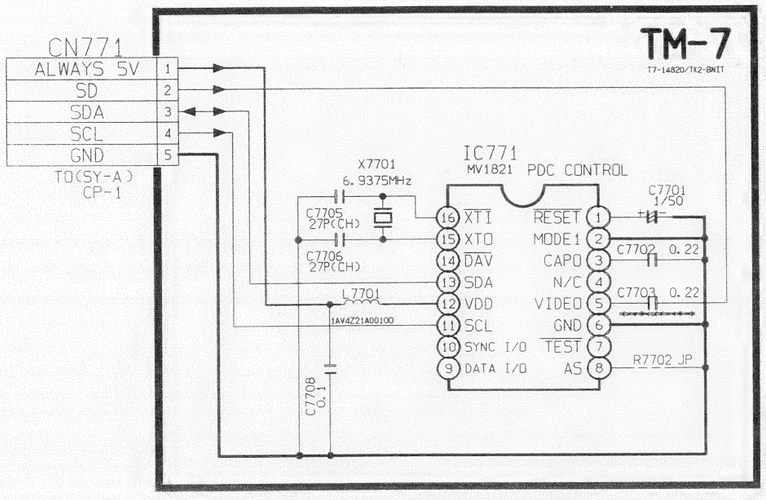
2-20. TM-8 BOARD VPS (VCR 3715 CE only)



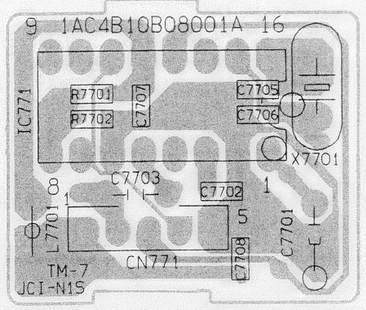
2-21. TM-8 P.W.B. (VCR 3715 CE only)



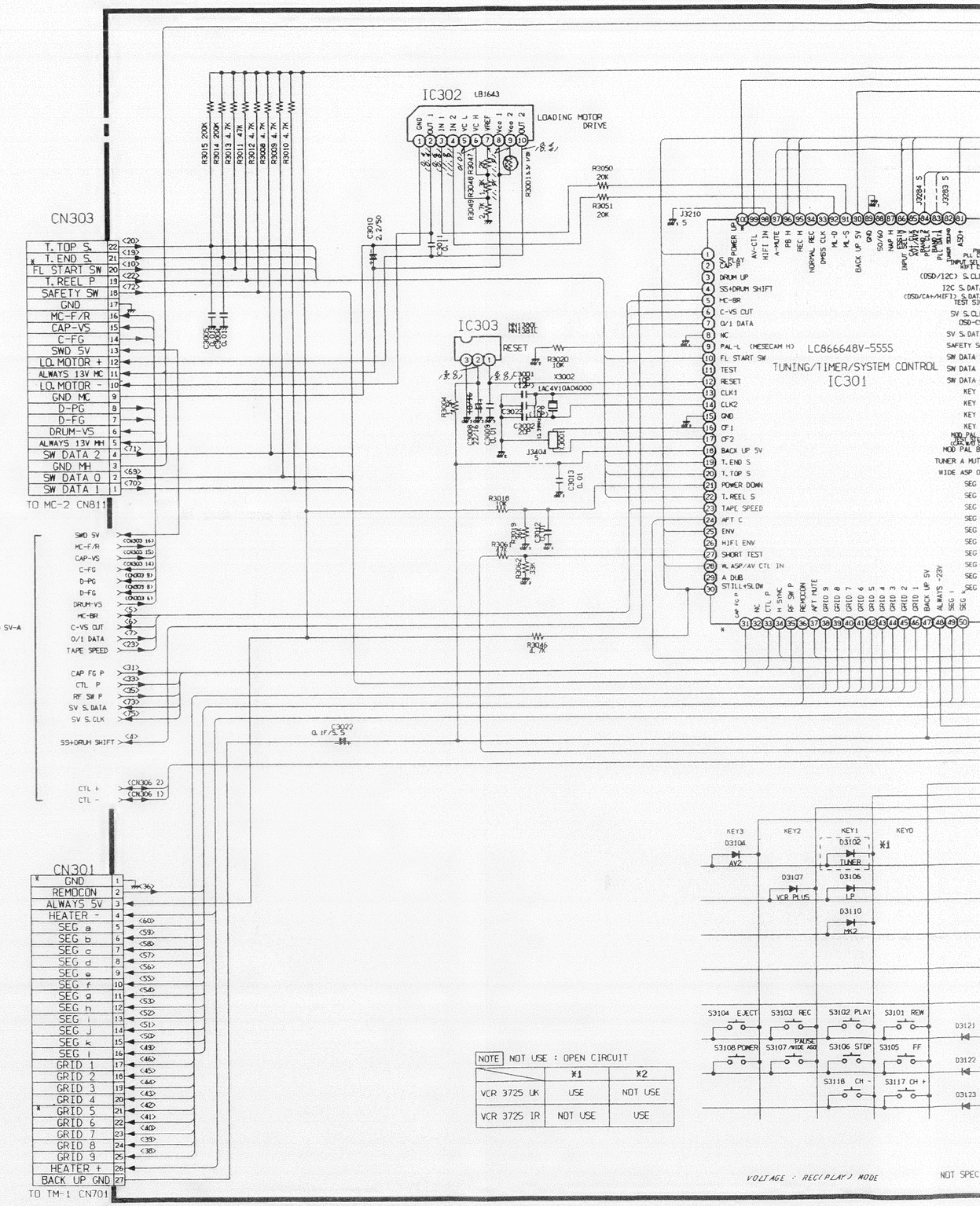
2-22. TM-7 BOARD PDC (VCR 3715 BN only)



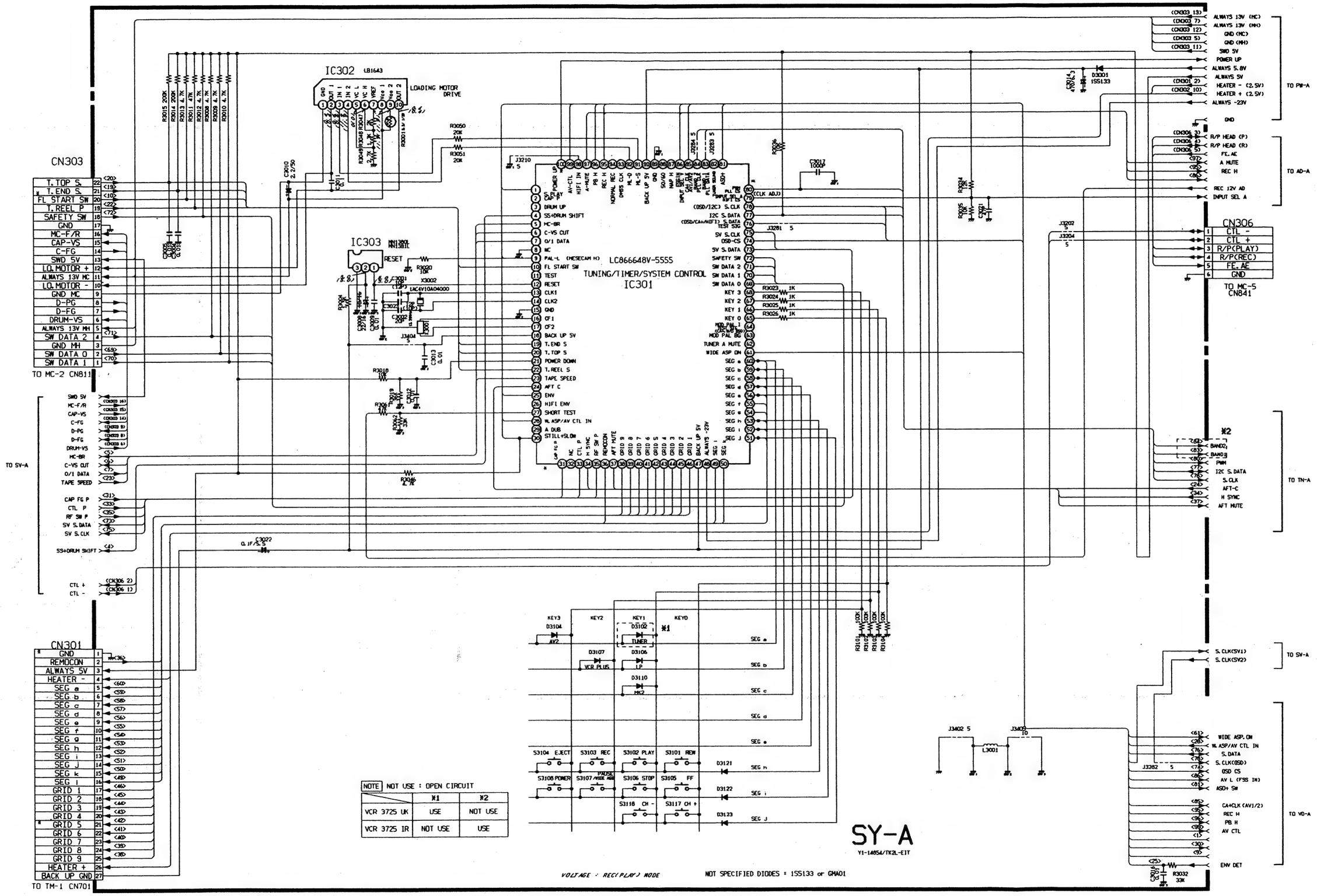
2-23. TM-7 P.W.B. (VCR 3715 BN only)



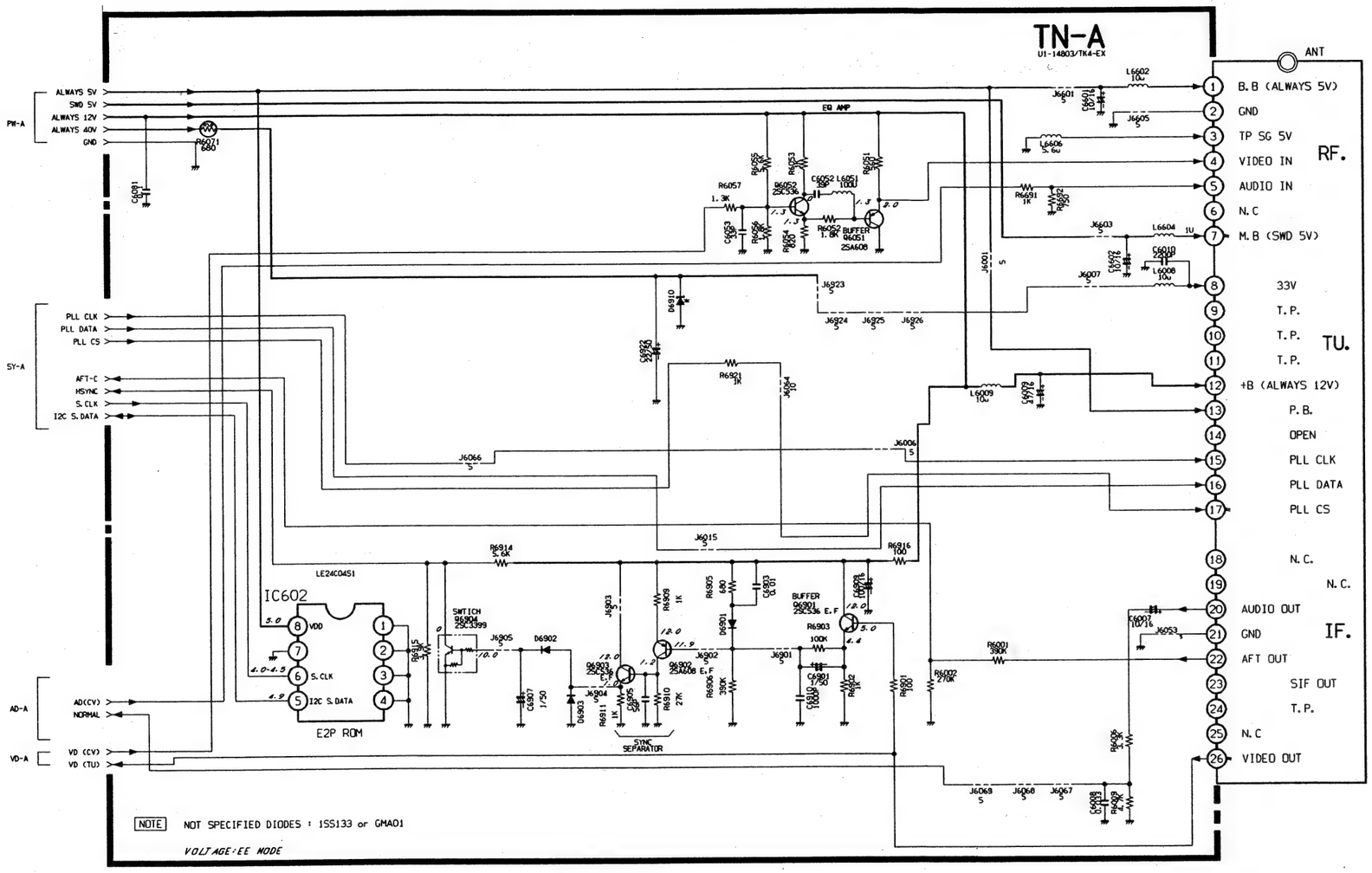
2-24. CP-1 BOARD (SY-A) SYSTEM CONTRO



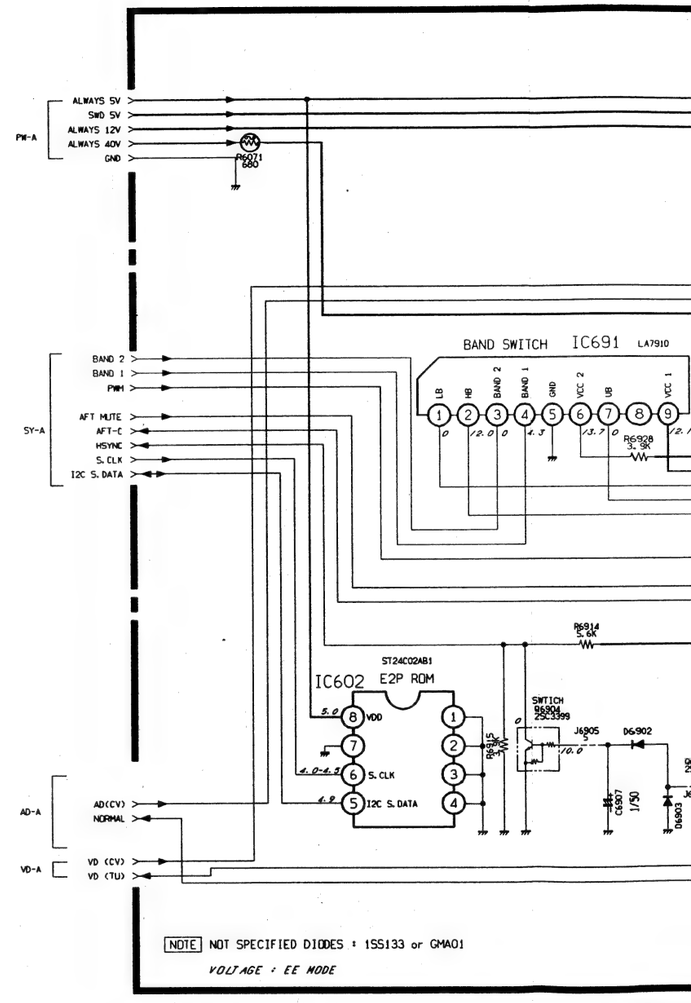
2-24. CP-1 BOARD (SY-A) SYSTEM CONTROL (VCR 3725 series)



2-25. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR 3715 SE,NE,BN)



2-26. CP-1 BOARD (TN-A



NOTES:

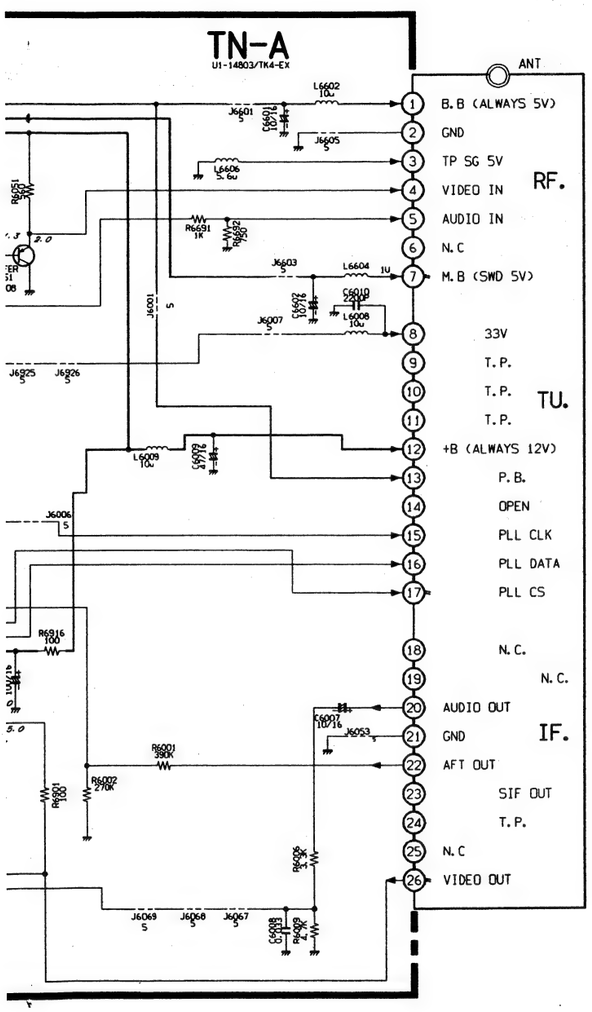
——— : Common parts for VCR 3725 series

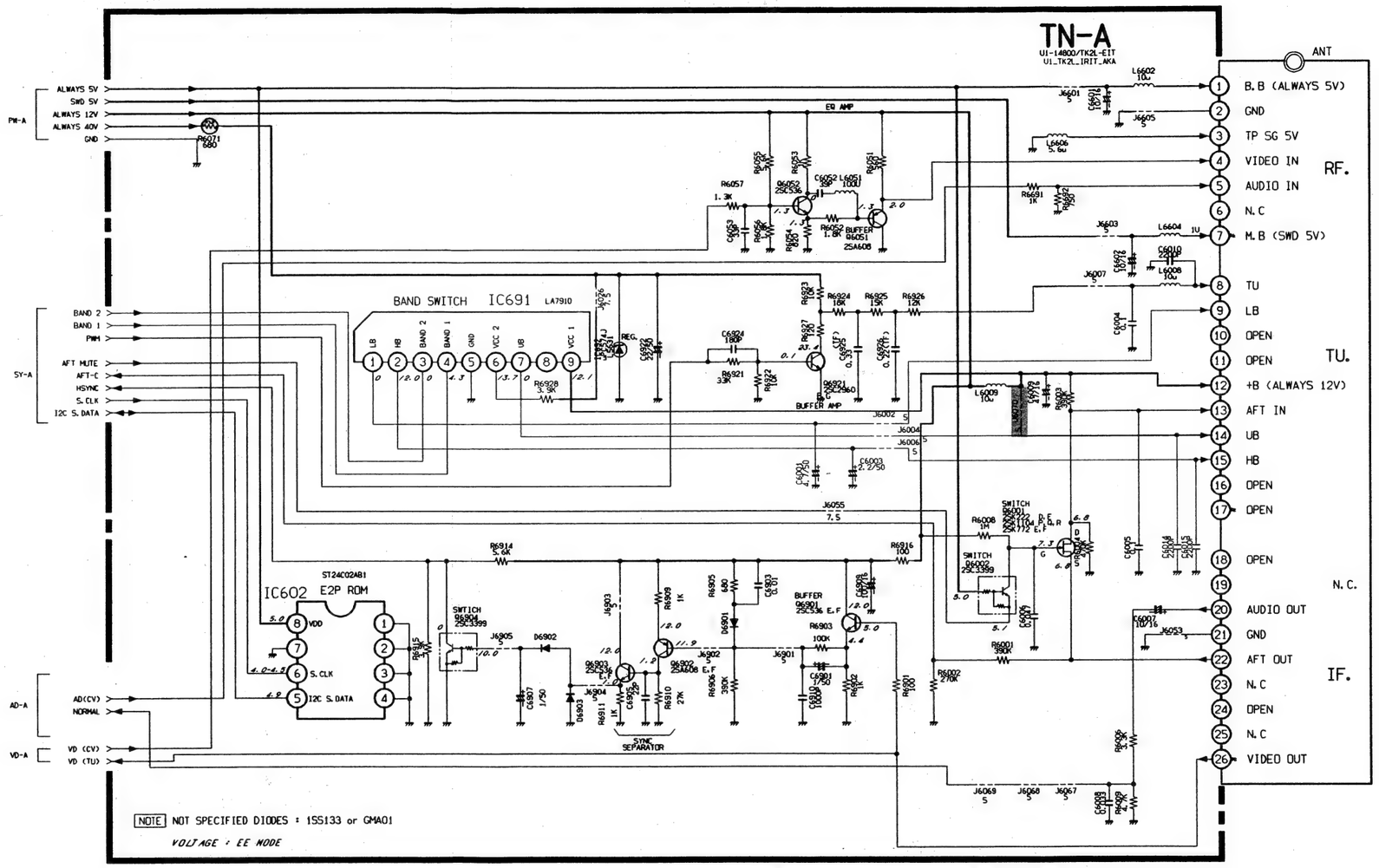
——— : The parts for VCR 3725 IR only

The parts marked ▒▒▒ is VCR 3725 UK only.

TK2/G-IT

2-26. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR 3725 series)





NOTES:

——— : Common parts for VCR 3725 series

——— : The parts for VCR 3725 IR only

The parts marked ▒▒▒ is VCR 3725 UK only.

Service-Manual

VCR

1994

NOKIA

V12150

VCR 3715 ES, 3715 CE, 3715 SE
VCR 3715 NE, 3715 BN
VCR 3725 UK, 3725 IR
VCR 3745 SE, 3745 UK, 3745 NE
VCR 3745 CE, 3745 BN
VCR 3785 NE/SE, 3785 CE
VCR 3785 UK, 3785 NL

SALORA

VCR 635 NE/IT, 835 NE/IT, 935 NE

LUXOR

VCR 4715 NE, 4745 NE, 4785 NE

Mechanical adjustments

Circuit diagrams, P.C.B., spare parts list, electrical alignment, please, refer to following page.

Service and repair work to be performed only in accordance with existing safety regulations!

NOKIA

CONNECTING PEOPLE

6611 9010

Liste der Service - Manuale **List of Service Manuals** **Liste des manuals** **Modell** **Model** **Modèle**	**Elektrischer Abgleich** **Schaltbilder, Leiterplatten,** **Ersatzteile-Liste** **Electrical alignment** **Circ. diagr., P.C.B.,** **Spare parts list** **Alignement,** **Schémas circ. imprimès,** **liste des pièces détachées** **No.**	**Mechanik-Justagen** **Mechanical adjustments** **Mécanique ajustages** **No.**
NOKIA VCR 3745 SE NOKIA VCR 3745 UK NOKIA VCR 3745 NE NOKIA VCR 3745 BN NOKIA VCR 3745 CE	6611 90 03	6611 90 10 **Note:** 6611 90 10 is only supplement for '94 series. Basic manual is 6611 77 06 (1990).
SALORA VCR 835 NE/IT LUXOR VCR 4745 NE	6611 90 04	
SALORA VCR 635 NE/IT LUXOR VCR 4715 NE	6611 90 05	
NOKIA VCR 3715 CE NOKIA VCR 3715 SE NOKIA VCR 3715 NE NOKIA VCR 3715 BN NOKIA VCR 3725 UK NOKIA VCR 3725 IR	6611 90 06	
NOKIA VCR 3785 NE/SE NOKIA VCR 3785 CE NOKIA VCR 3785 UK NOKIA VCR 3785 NL	6611 90 07	
SALORA VCR 935 NE LUXOR VCR 4785 NE	6611 90 08	
NOKIA VCR 3715 ES	6611 90 09	

1. OUTLINE OF '94 MIDI MID-MOUNT MECHANISM

The '94 Midi mid-mount mechanism is used for video tape recorders shipped as new products of 1994. The '94 Midi mid-mount mechanism has the same basic structures as the P90 mechanism shipped in 1990 except the following. As this manual omits the description of parts which are the same as those of P90, please refer to the P90 Mechanism Service Technical Information.

Note: (9) to (11) of the followings have already been changed in the "P91 mechanism" and repeated in "Service Technical Information of P91 mechanism".

(1) Some models have new reel drive system parts (supply reel table, take up reel table, reel gear (S), reel gear (T), COMPL idler clutch). As these are not interchangeable with the older ones, be sure to check the parts list when replacing them.

(2) The main cam gear, load rack and load gear (T) have been replaced with new ones to further simplify the tape loading mechanism. Therefore, the load cam lever of the old mechanism is not required. The new tape loading mechanism is shown in the figure 2-1.

(3) The MC-2 and MC-3 boards between the loading motor and system control circuit have been replaced with new ones. New MC-2 and MC-3 boards are used. For this reason, a relay board (VHJ-0103) for the service tool mode selector (VHJ-0050) is required. The conductor side of the MC-2 board is marked "T-HiFi" in big letters. Check that CN811 has 22-pins and connect the relay board (VHJ-0103).

(4) The pulley bracket is no longer used and the special screw has been employed.

(5) The shape of the clutch lever assembly has been partially changed and the damper is no longer used.

(6) The shape of the front helical gear of the loading motor has been partially changed and the washer is no longer used.

(7) In some models, the structure of the drum (cylinder) may differ from that of the conventional drum.

(8) Some models do not have the impedance roller.

(9) The height adjustment of the exit side fixed guide no longer required as the precision of the tape running system has been heightened.

(10) The form of MC-1 and MC-4 board connector (CN801) near the reel drive part has been changed.

(11) The auto head cleaner mechanism is used for cleaning the video head automatically during loading and unloading.

2. SECTIONS CHANGED FROM P90 MECHANISM

The page number within the parenthesis above each title mentioned later indicates the page number of the P90 Mechanism Service Technical information. Replace the page numbers with those in the parenthesis on usage.

2-2. DESCRIPTION OF MECHANISM DRIVE

To realize the thin type mechanism, a loading motor and two pieces of cam (MAIN CAM GEAR and the MODE CAM GEAR) to be driven by the said motor are mounted on the upper part of the capstan motor, that was a dead space in the conventional mechanisms hitherto available, with a view to optimization of parts mounting layout. (Fig. 2-1 and Fig. 2-2.)

- The impedance roller is not used on this mechanism.
- The shaded sections are different from P90 mechanism.

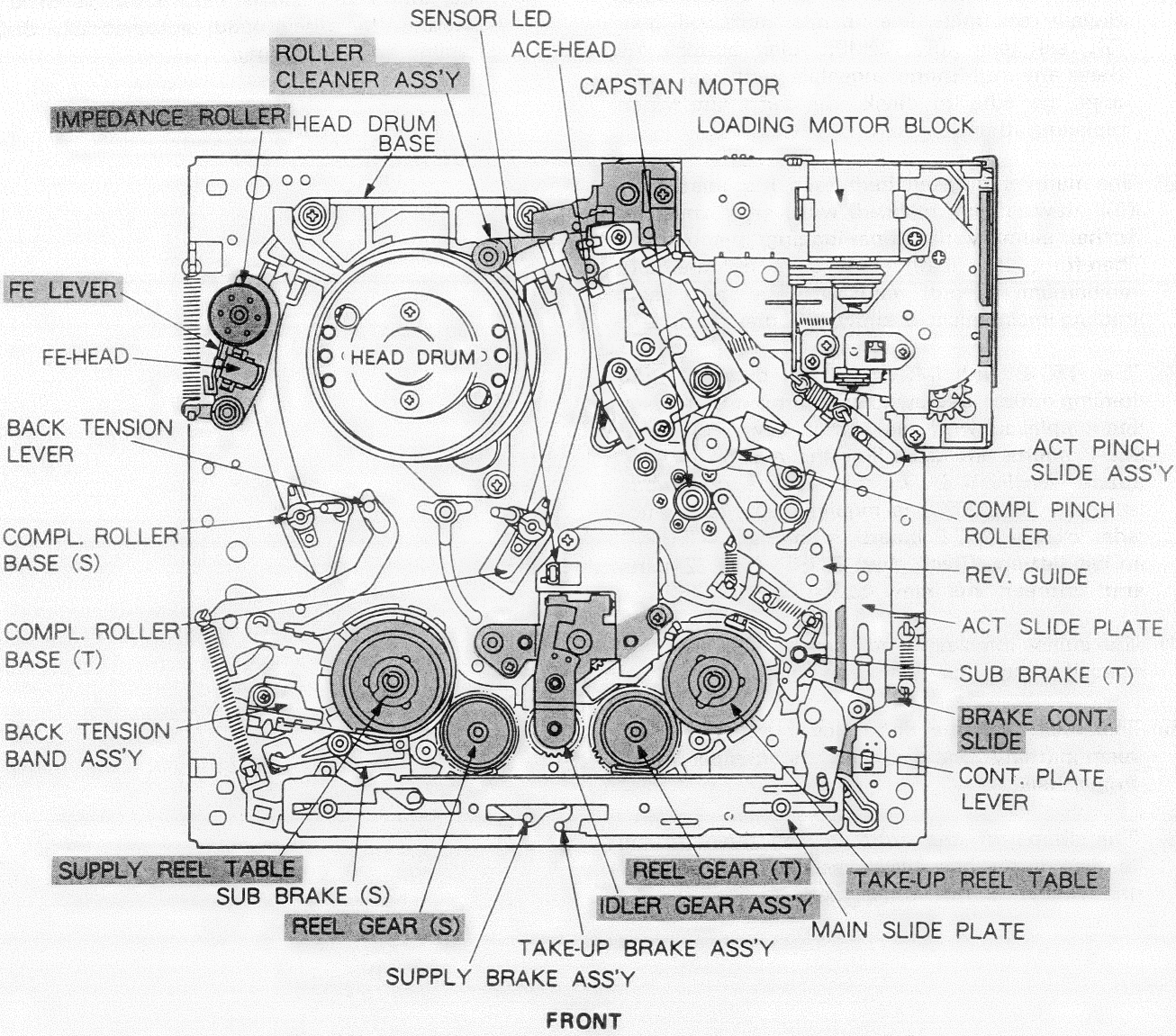


Fig. 2-1. Top View of Mechanism (Initial mode)

- Some models do not have the capstan soft brake.
- The shaded sections are different from P90 mechanism.

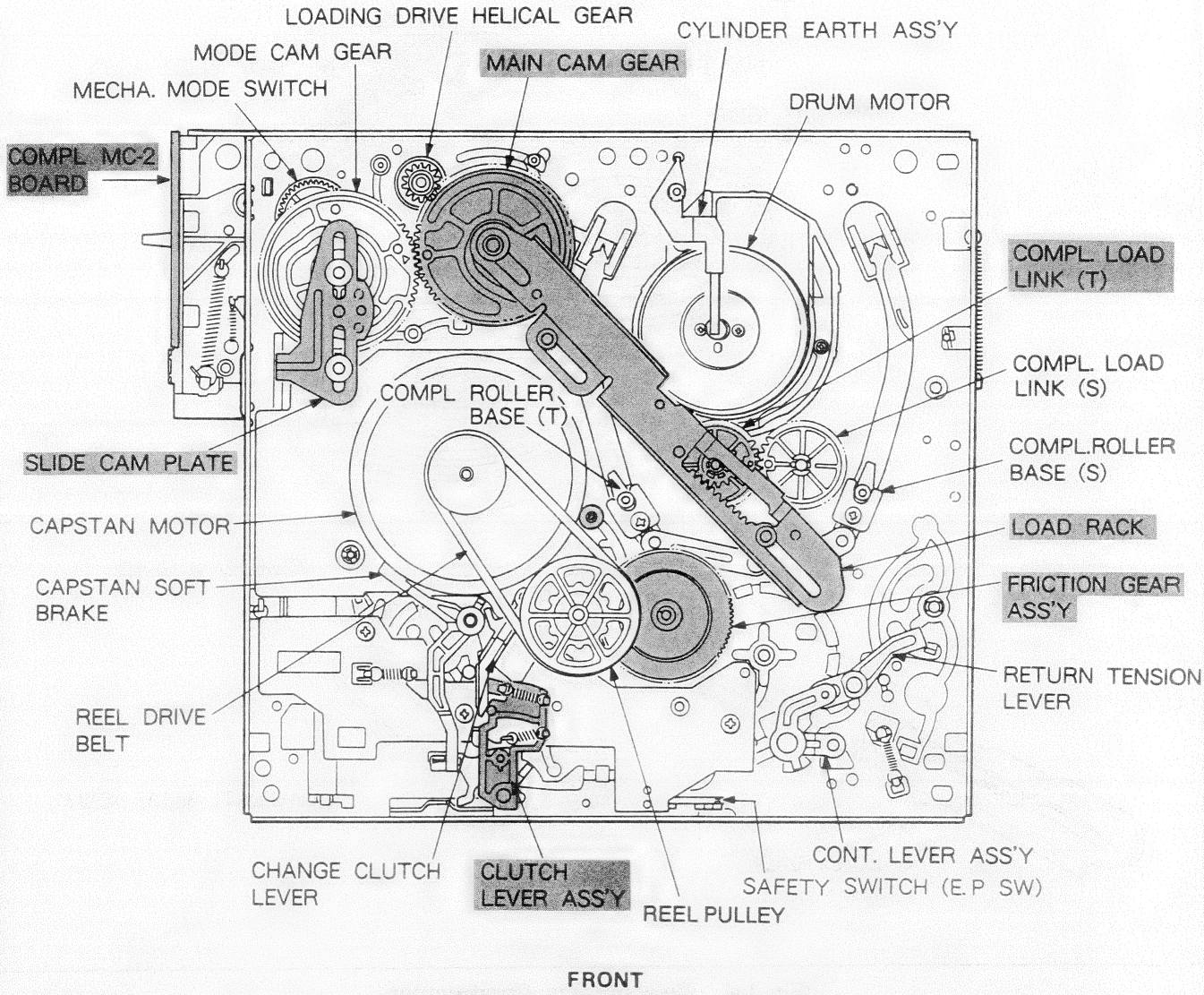


Fig. 2-2. Bottom View of Mechanism (Initial mode)

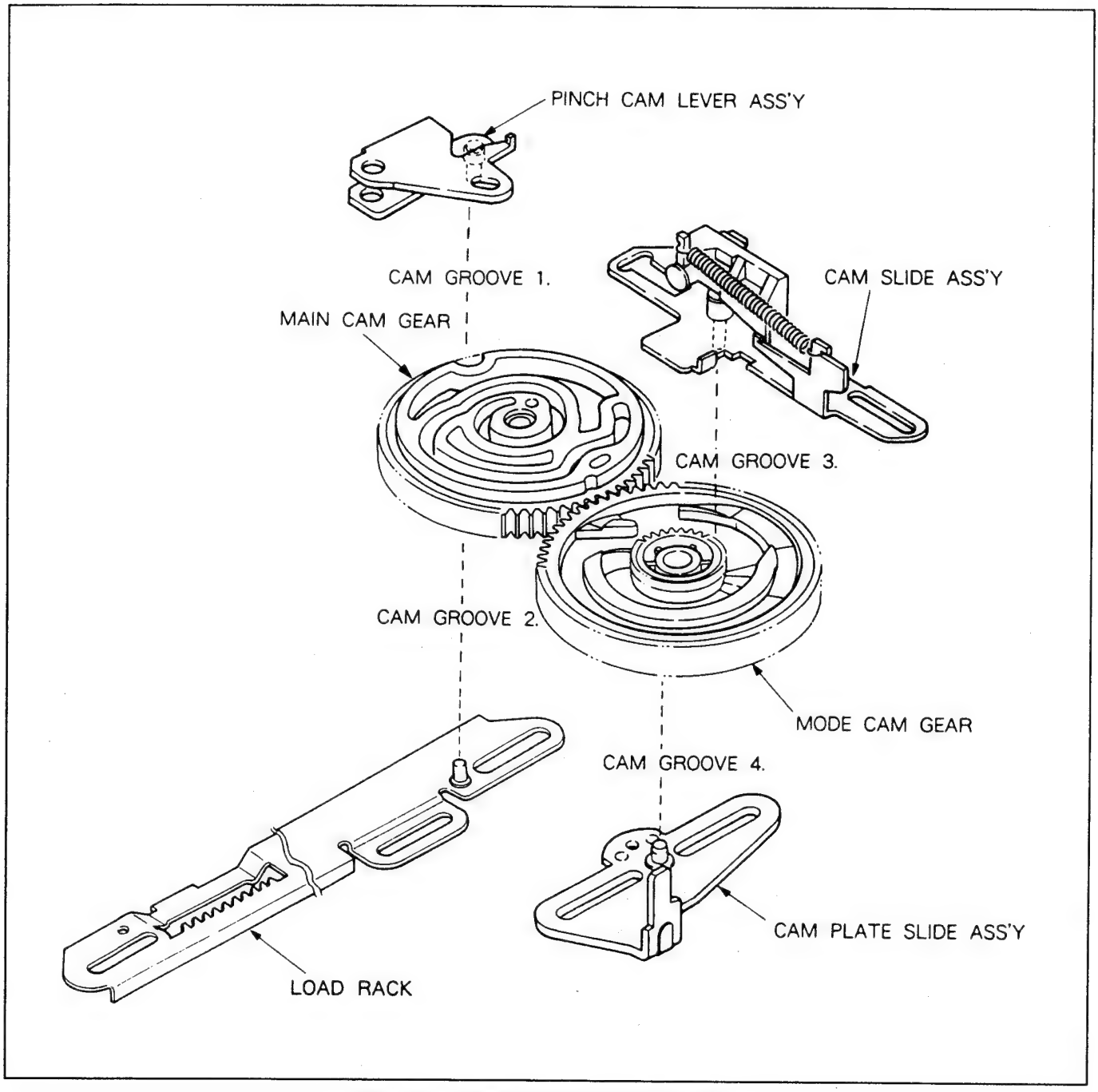


Fig. 2-4. View of Cams Construction

(1) Tape Loading Mechanism

The tape loading mechanism is compactly designed with use of a LOAD RACK for loading by drive from the before-mentioned MAIN CAMs with CAM GROOVE 2. The LOAD RACK is laid on the dead space in between the DD capstan motor and the head motor for effective space utilization. (Fig. 6-2-5)
The process from tape pull-out upon loading to contact of the leading guide section with the stopper of drum base and press-fitting under tension of spring is guided and driven in such a manner that the rod is drawn inward from the outer circumferential direction of the CAM GROOVE 2, thereby reducing the load torque (PV value) to the CAM GROOVE. And, the load of the loading motor is minimized to enhance reliability.

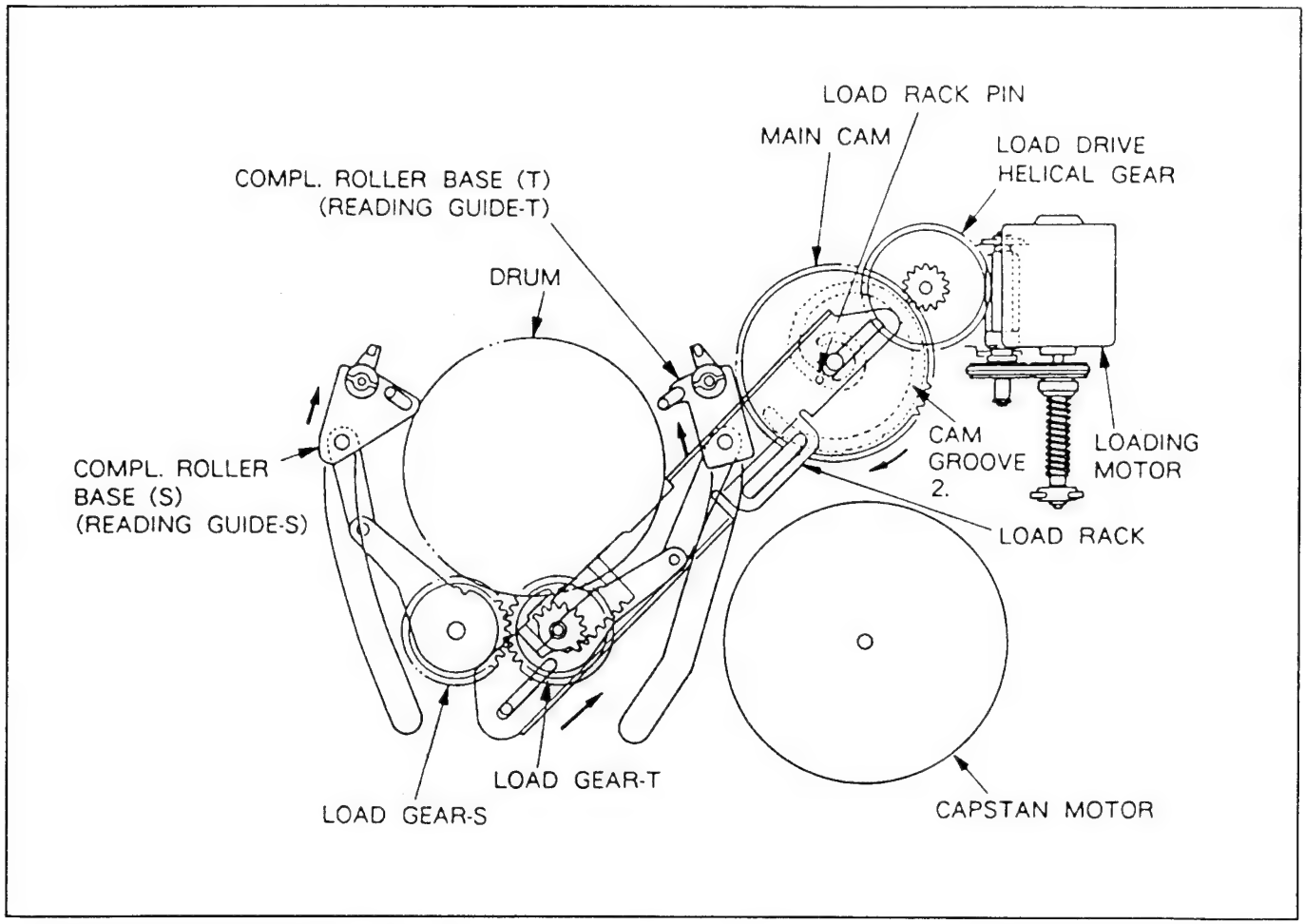
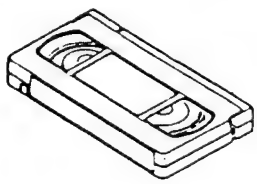


Fig. 2-5. Construction of Tape Loading Mechanism

4-1-3. Service Jigs

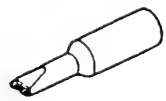
No.	Jig	Jig No.	Remarks
1	Alignment tape	VHJ-0008	SP color bar, 1kHz (normal)
2	Alignment tape	VHJ-0009	SP monoscope, 7kHz (normal)
3	Alignment tape	VHJ-0052	LP monoscope, 3KHz (normal)
4	Eccentric screwdriver	VHJ-0003	For tape path adjustment
5	Nut box	VHJ-0048	For fixed guide removal
6	Torque gauge	VHJ-0004	For reel take-up torque measurement
7	Cassette torquemeter	VHJ-0016	For back tension torque measurement
8	Position adjustment gauge	VHJ-0049	For position adjustment
9	Torque gauge screwdriver	VHJ-0014	For screw fastening torque adjustment
10	3mm dia. bit for torque screwdriver	VHJ-0045	Spare bit for the torque gauge screwdriver
11	Video head removing tool	VHJ-0041	For upper drum removal
12	Cassette stand plate gauge	VHJ-0001	For reel height adjustment
13	Mode selector and 26-pin flexible flat cable (VHJ-0064)	VHJ-0050	For mechanism mode selection and for connecting mode selector
14	26-pin flexible flat cable	VHJ-0064	Spare cable for mode selector
15	Mode selector relay board	VHJ-0103	Relay board for mode selector
16	REV guide lever removing tool	VHJ-0073	REV guide lever removal

VHJ-0008, VHJ-0009, VHJ-0052



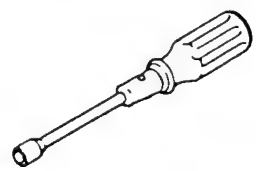
No. 1, 2, 3

VHJ-0003



No. 4

VHJ-0048

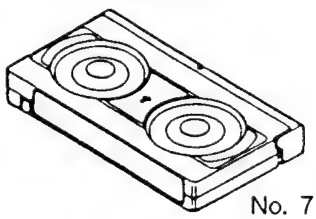


No. 5

VHJ-0004

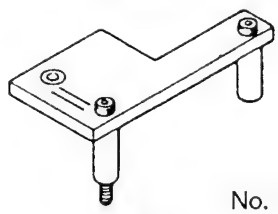
No. 6

VHJ-0016



No. 7

VHJ-0049



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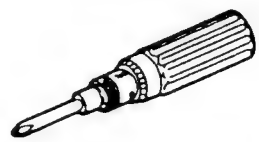

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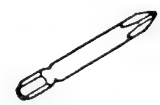

No. 10

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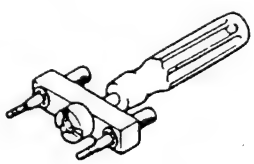
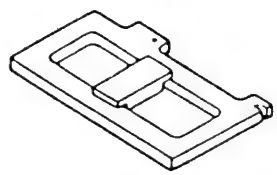


No. 11

VHJ-0001



No. 12

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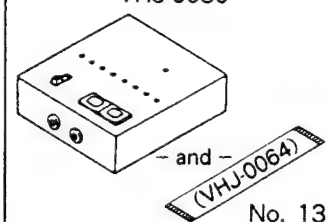
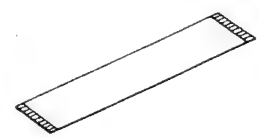


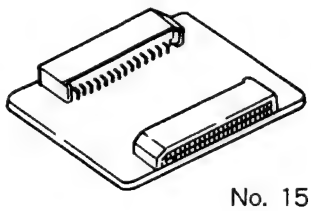
No. 13

VHJ-0064



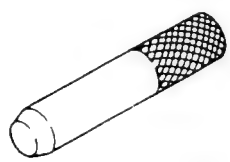
No. 14

VHJ-0103



No. 15

VHJ-0073



No. 16

4-2-3. Connection Method 2 (See Fig. 4-2-2)

Note: The conductor side of the MC-2 board is marked "T-HiFi" in big letters. Use the mode selector relay board (VHJ-0103) only when CN811 is 22-pin.

1) Remove the 22-pin flat cable extending from the COMPL MC-2 board connector (CN811) from the connector of the system control circuit board, and connect it to the 22-pin connector of the mode selector relay board (VHJ-0103).
2) Connect the 26-pin flat cable (VHJ-0064) of the mode selector (VHJ-0050) provided between the mode selector body and the 26-pin connector of the mode selector relay board (VHJ-0103).

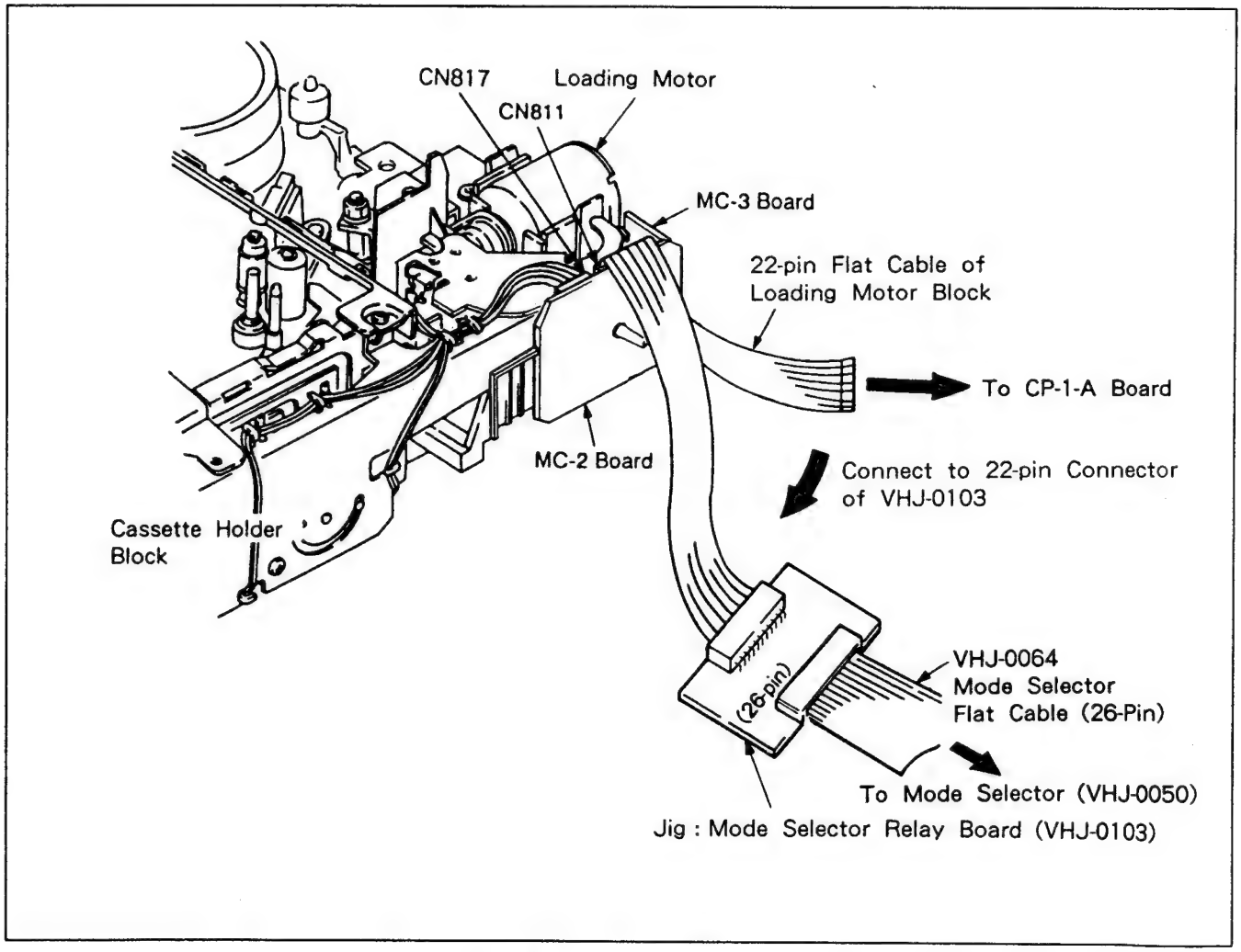


Fig. 4-2-3. Connection

5-2-4. Cassette Drive Gear (left) (See Fig. 5-2-4)

1. Removal

1) Remove the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
2) Remove the E ring ②.
3) Open the hook ③, then remove the LEVER GEAR ASS'Y L ④. Take care not to open the hook ③ too much, otherwise it may get deformed or broken. If it does, replace it.
4) Remove the SPRING COIL ⑤ from the LEVER GEAR ASS'Y L ④.

2. Remounting

1) Apply grease to the axle ⑨ and shaft ⑩.
2) Align with the COUPLE GEAR L ⑬ and the IDLER GEAR L ⑥ as shown in Fig B.
3) Hook the SPRING COIL ⑤ to the LEVER GEAR ASS'Y L ④.
4) Mount the LEVER GEAR ASS'Y L ④ onto the axle ⑨ and the shaft ⑩. Align with the IDLER GEAR L ⑥ as shown in Fig. B.
5) Mount the COMPL CASSETTE MECHANISM onto the chassis as instructed in 5-2-1.

Note: The end of the DOOR OPEN LEVER ⑦ leans against the front side of the CASSETTE DOOR ⑪ as shown in Fig. A.

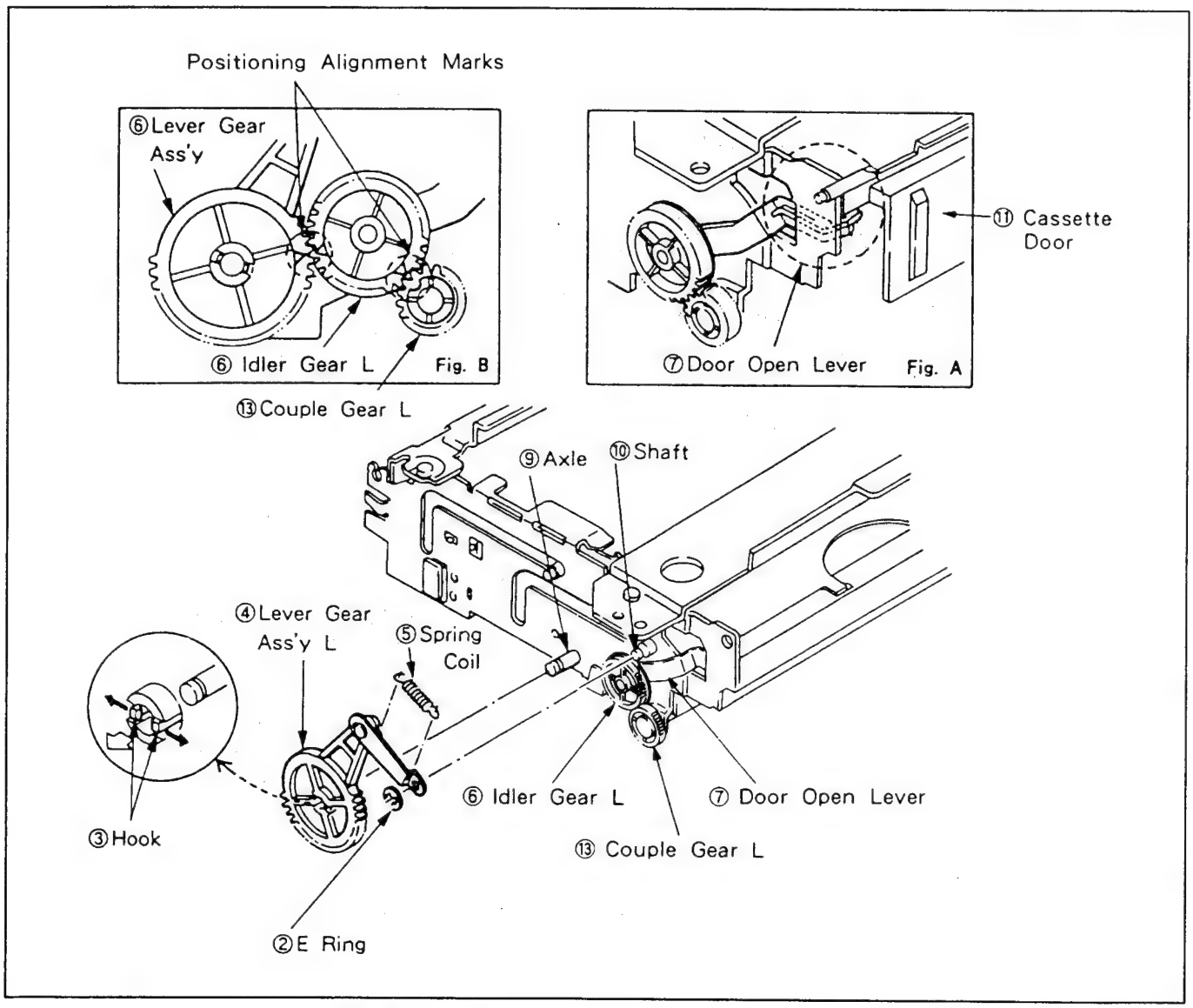


Fig. 5-2-4. Cassette Drive Gears (Left Side)

5-4. TAPE LOADING MECHANISM

5-4-1. Main Parts of the Tape Loading Mechanism (See Fig. 5-4-1.)

1. Removal

1) Remove connectors from the DRUM MOTOR board (SV-5).
2) Remove the three screws ①, then remove the REINFORCE BRACKET ②.
3) Remove the three special washers ③ and ⑦, then remove the spacer ⑥, LOAD RACK ④ and MAIN CAM ⑧.
4) Unhook the LOAD GEAR T hook ⑩, then remove the LOAD GEAR T ⑨ as shown in Fig. A, with the SPRING COIL ⑪ and the LOAD LEVER ASS'Y T ⑫ attached to it.
5) Unhook the LOAD GEAR S hook ⑭, then remove the LOAD GEAR S ⑬ as shown in Fig. B, with the SPRING COIL ⑮ and the LOAD LEVER ASS'Y S ⑯ attached to it.

Note: Take care not to open the LOAD GEAR hooks too much, otherwise they may be deformed or broken. If they are, replace them.

2. Remounting

1) Apply grease to the hole ⑰ of the LOAD LEVER ASS'Y S ⑯, as shown in Fig. B.
2) Apply grease to the hole ㉒ of the LOAD LEVER ASS'Y T ⑫ as shown in Fig. A, and to the sections of the LOAD GEAR T ⑨ as indicated with an arrow in Fig. C.
3) Apply grease to GROOVE 1, GROOVE 2 and to the outer side of the MAIN CAM ⑧, shown in Fig. E.
4) Apply grease to the three oval holes of the LOAD RACK ④ as shown in Fig. D.
5) Apply grease to the outer surface of axles ⑲, ⑳ and ㉘.
6) After assembling as shown in Fig. B, mount the LOAD GEAR S ⑬ onto the axle ⑲. Insert the ROLLER BASE S pin ⑱ into the hole ⑰ of the LOAD LEVER ASS'Y S.
7) After assembling as shown in Fig. A, mount the LOAD GEAR T ⑨ onto the axle ⑳. When doing so, align the INITIAL mode positioning alignment holes ㉑ of the LOAD GEAR S ⑬ and the LOAD GEAR T ⑨ to the INITIAL mode position. Insert the ROLLER BASE T pin ㉓ into the hole ㉒ of the LOAD LEVER ASS'Y T ⑫.
8) Mount the MAIN CAM ⑧ onto the axle ㉖. At that time, make sure that the INITIAL mode positioning alignment holes ㉕ of the MAIN CAM ⑧ and the MODE CAM ㉔ match the INITIAL mode positioning alignment holes ㉞ of the MECHANISM CHASSIS. Also check to be sure that the pin ㉗ of the CAM PINCH LEVER ASS'Y is put in the GROOVE 1 of the MAIN CAM as shown in Fig. E.
9) Mount the LOAD RACK ④ onto the axles ㉖ and ㉛. At that time, set the INITIAL mode positioning alignment marks ㉚ of the LOAD RACK ④ and the LOAD GEAR T ⑨ to the INITIAL mode position. Insert the LOAD RACK pin ㉙ into the MAIN CAM GROOVE 2 as shown in Fig. E.
10) Mount the spacer ⑥ and the special washer ⑦ onto the axle ㉖.
11) Mount the two special washers ③ onto the two axles ㉛.
12) Mount the REINFORCE BRACKET ② with the three screws ①.
13) Insert the connector into the DRUM MOTOR board (SV-5).
14) Confirm that loading and unloading are performed smoothly.

Note: Be sure to perform INITIAL mode positioning of cams and gears precisely.

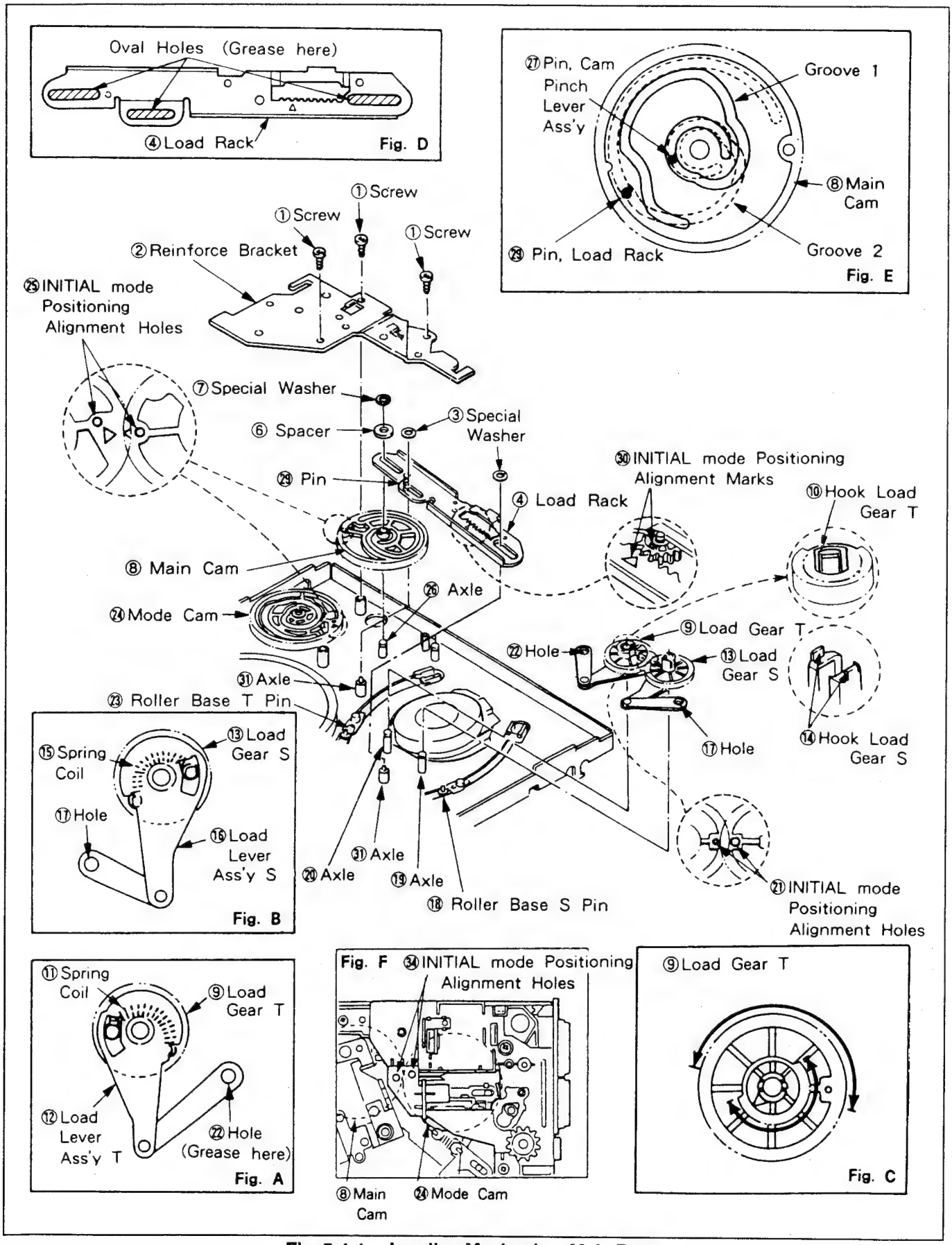


Fig. 5-4-1. Loading Mechanism Main Parts

5-6. PINCH ROLLER PRESSURE MECHANISM (See Fig. 5-6-1.)

1. Removal

1) Remove the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
2) Remove the COMPL HEAD BRACKET as instructed in 5-5.
3) Remove the PINCH SPRING COIL ①.
4) Remove the special washer ②, then remove the PINCH LEVER ASS'Y ③.
5) Remove the REV GUIDE LEVER SPRING COIL ④.
6) Remove REV GUIDE LEVER ASS'Y ⑥ from the hook ⑤ of the plastic bearing on the bottom side. Use a jig VHJ-0073 shown in Fig. 5-6-2 to widen the hook of the plastic bearing. By so doing, the above removal of the REV GUIDE LEVER ASS'Y ⑥ can be made more easily. Care should be taken to avoid pushing the jig VHJ-0073 too much. Pushing it too hard may damage the hook in an extreme case.
7) Remove the SLIDE BRAKE SPRING COIL ⑦.
8) Remove the special washer ⑧, then remove the PINCH CAM LEVER ASS'Y ⑨.
9) Remove the ACT PINCH SLIDE ASS'Y ⑩.

Note: If the hook ⑤ of the plastic bearing is damaged, reference should be made to Section 3. "Method of Repairing the Bearing Section of REV GUIDE LEVER ASS'Y".

2. Remounting

1) Apply grease to pins ⑫/⑬ and axles ⑯/⑱.
2) Apply grease to the ACT PINCH SLIDE ASS'Y pin ⑰.
3) Set the INITIAL mode with the mode selector (VHJ-0050).
4) Mount the ACT PINCH SLIDE ASS'Y ⑩ onto pins ⑫ and ⑬.
5) Insert the pin ⑭ of the PINCH CAM LEVER ASS'Y ⑨ into the MAIN CAM ⑪ GROOVE 1, and mount onto the axle ⑯ while inserting the ACT PINCH SLIDE ASS'Y pin ⑰ of the ACT PINCH SLIDE ASS'Y into the hole ⑮.
6) Mount the special washer ⑧ onto the axle ⑯.
7) Hook the SLIDE BRAKE SPRING COIL ⑦ to the plastic pin ⑲.
8) Mount the REV GUIDE LEVER ASS'Y ⑥ to the plastic molding bearing, then fix it with the hook ⑤ at the bottom.
9) Hook the REV GUIDE LEVER SPRING COIL ④.
10) Mount the PINCH LEVER ASS'Y ③ to the axle ⑱.
11) Mount the special washer ② to the axle ⑱.
12) Hook the PINCH SPRING COIL ① between the ACT PINCH SLIDE ASS'Y ⑩ and the PINCH LEVER ASS'Y ③.
13) Mount the COMPL HEAD BRACKET as instructed in 5-5.
14) Mount the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
15) Perform ACE head adjustment as instructed in 6-4.

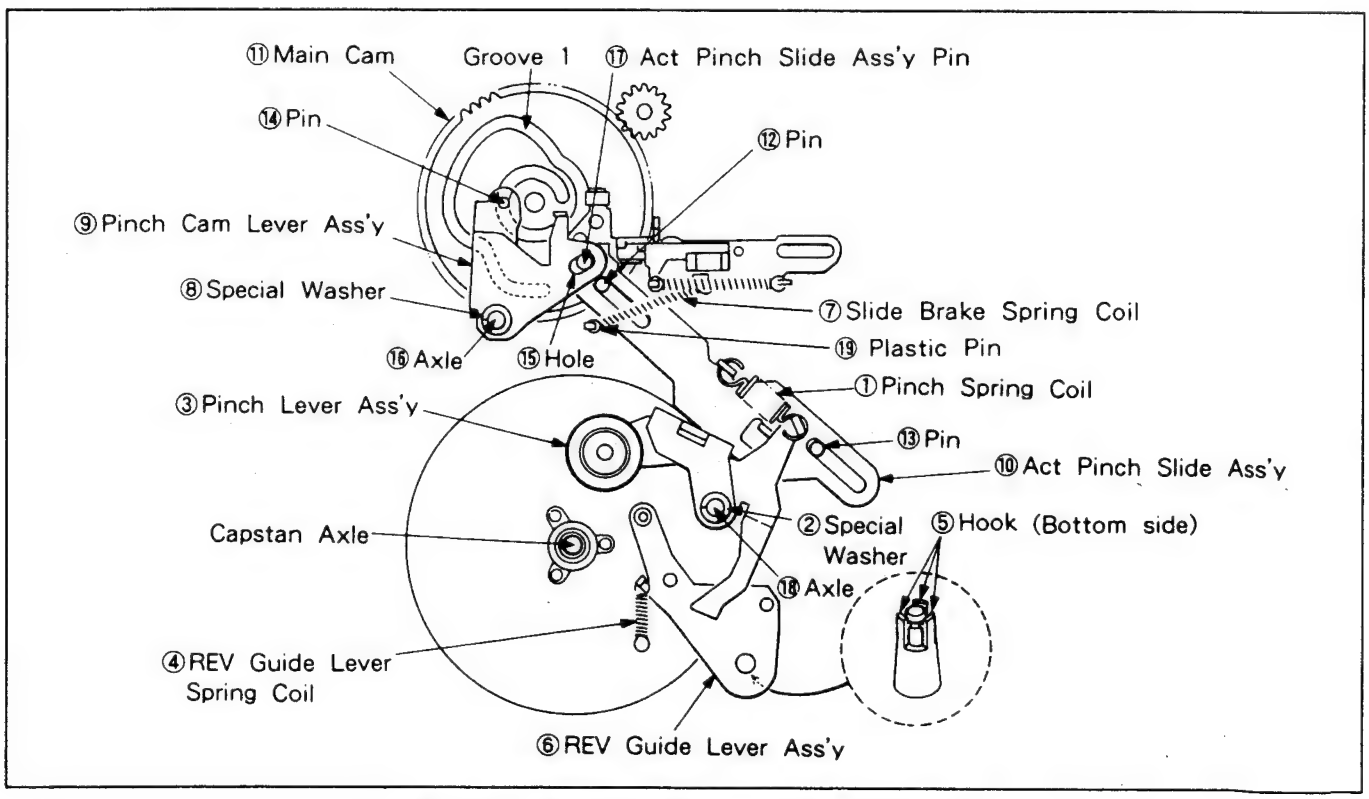


Fig. 5-6-1. Pinch Roller Pressure Mechanism

5-8-4. Reel Pulley and Friction Gear Ass'y (See Fig. 5-8-4.)

1. Removal

1) Remove the REEL DRIVE BELT ③.
2) Remove the special washer ④, then remove the REEL PULLEY ⑤.
3) Remove the special washer ⑥, then remove the FRICTION GEAR ASS'Y ⑦ and the washer ⑧.

2. Remounting

1) Apply one drop of oil to the parts of axles ⑨ and ⑩ indicated with arrows.
2) Mount the washer ⑧ and the FRICTION GEAR ASS'Y ⑦ onto the axle ⑨.
3) Mount the special washer ⑥ onto the axle ⑨.
4) Mount the REEL PULLEY ⑤ onto the axle ⑩.
5) Mount the special washer ④ onto the axle ⑩.
6) Set the REEL DRIVE BELT ③.

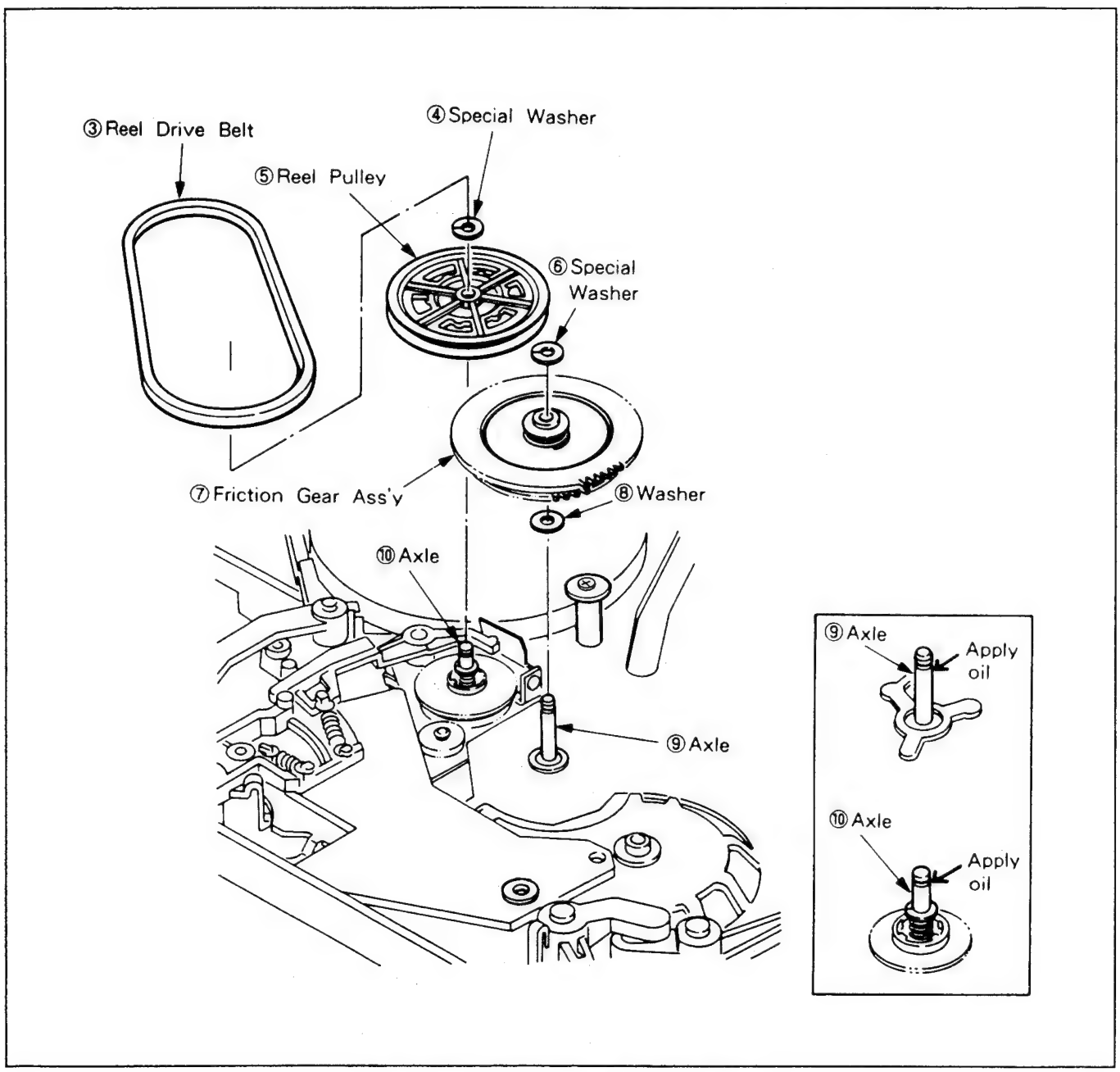


Fig. 5-8-4. Reel Pulley & Friction Gear

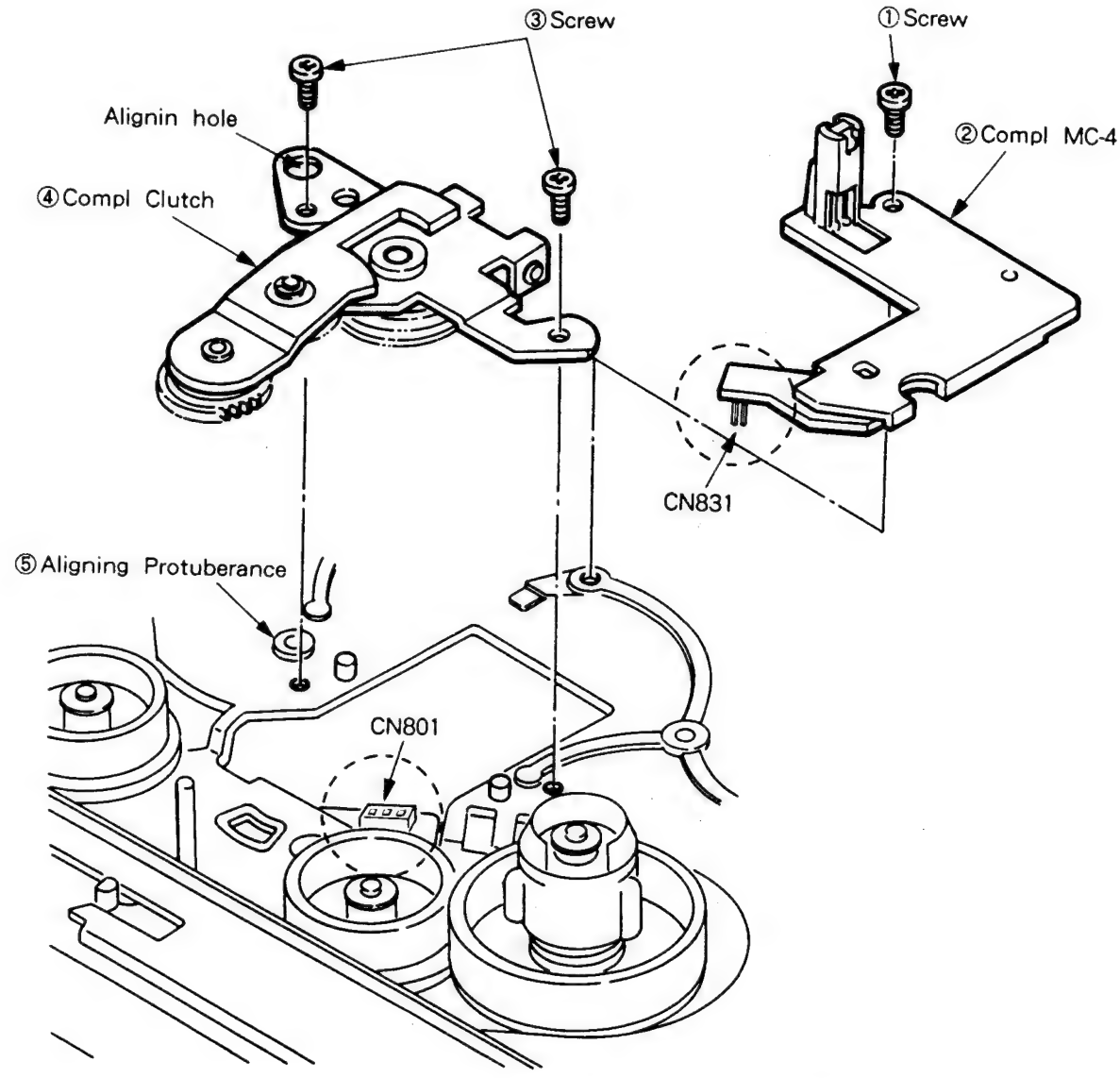
5-8-5. COMPL Clutch (See Fig. 5-8-5.)

1. Removal

1) Remove the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
2) Remove the REEL DRIVE BELT and the REEL PULLEY as instructed in 5-8-4.
3) Remove the screw ①, then remove the COMPL MC-4 ②.
4) Remove the two screws ③, then remove the COMPL CLUTCH ④.

2. Remounting

1) Mount the COMPL CLUTCH ④ with the two screws ③, aligning it with the protuberance ⑤.
2) After inserting the CN831 (COMPL MC-4) into the CN801 (COMPL MC-1), mount the COMPL MC-4 with the screw ①.
3) Mount the REEL PULLEY and REEL DRIVE BELT as instructed in 5-8-4.
4) Mount the COMPL CASSETTE MECHANISM as instructed in 5-2-1.



Note: The form of CN801 and CN831 differ from the P90 mechanism.

Fig. 5-8-5. Compl Clutch

5-10. FIXED GUIDE, FE HEAD LEVER ASS'Y

5-10-1. S-Side Fixed Guide and FE Lever Ass'y (See Fig. 5-10-1.)

1. Removal

1) Remove the special nut ①, then remove the GUIDE PIPE ③ and the special washer ② (lower), in that order.
2) Remove the SPRING COIL ⑤.
3) Remove the FTE HEAD connector, then remove the FE HEAD LEVER ASS'Y ⑦.

2. Remounting

1) Mount the FE LEVER ASS'Y ⑦ onto the axle ⑧.
2) Hook the SPRING COIL ⑤ between the chassis notch ⑨ and the FE LEVER ASS'Y hook ⑩.
3) Mount the special washer ② (lower), the GUIDE pipe ③ and the special nut ① to the axle ⑧, in that order. At that time, do not excessively tighten the special nut ① to avoid idle rotation of the axle rivet. The height of fixing guide on the inlet side is not required.
4) Connect the connector to the FTE HEAD.

Note : The impedance roller is not used on this mechanism.

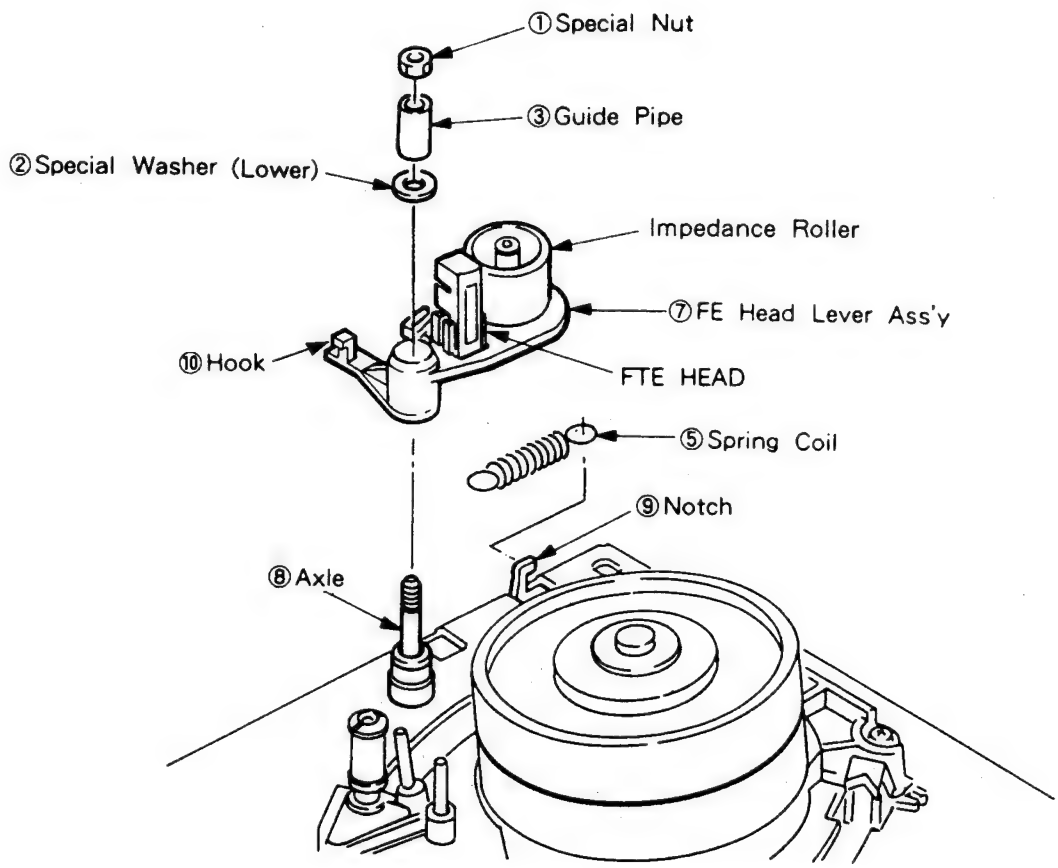


Fig. 5-10-1. Fixed Guide (S) & FE Lever Ass'y

5-10-3. Exit side Fixed Guide (See Fig. 5-10-3.)

1. Removal

1) Remove the CAP ①.
2) Remove the special NUT ②, then remove the special washer ③ (upper), the GUIDE PIPE ④, the special washer ③ (lower) and the sleeve ⑤, in that order.

2. Remounting

1) Mount the sleeve ⑤, the special washer ③ (lower), the GUIDE PIPE ④, the special washer ③ (upper) and the special NUT ②, in that order, to the axle ⑥.
2) Mount the CAP ① onto the axle ⑥.

Note: There is no need of height adjustment of the exit side fixed guide.

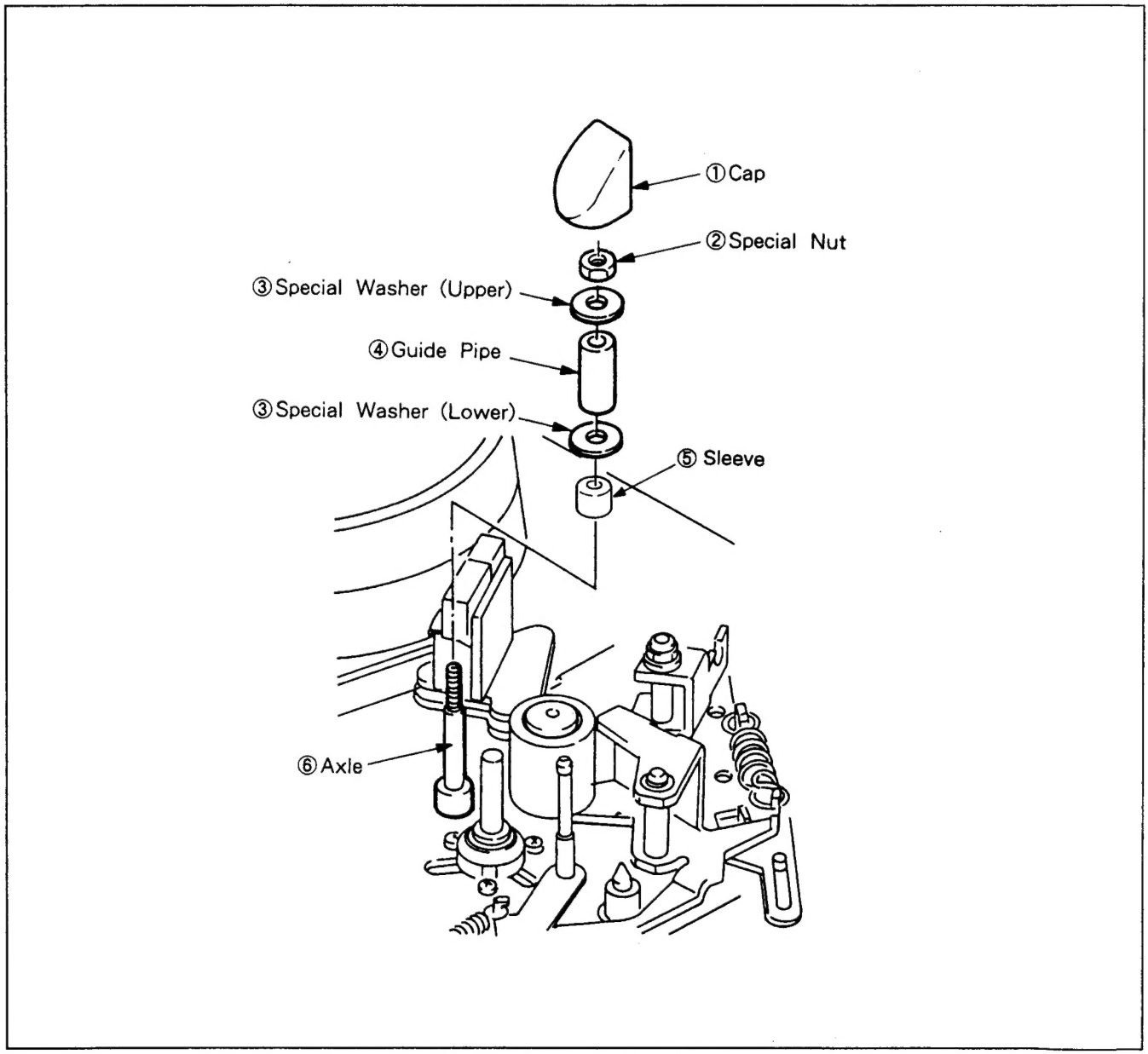


Fig. 5-10-3. Fixed Guide (T)

5-11. DRUM SECTION

5-11-1. Drum Motor(rotor, stator)(See Fig. 5-11-1.)

1. Removal

1) Referring to 5-4-1 in this SUPPLEMENT, remove the special washer and the LOAD RACK.
2) Remove the screw ①, then remove the CYLINDER EARTH ASS'Y ②.
3) Remove the two screws ③, then remove the ROTOR ④ and SPACER.
4) Remove the STATOR board connector ⑩.
5) Remove the three screws ⑤, then remove the STATOR ⑥.

2. Remounting

1) Mount the STATOR ⑥ with the three screws ⑤.
2) Mount the SPACER ⑪ on to the AXLE ⑫.
3) While aligning the ROTOR oval hole ⑦ with the ROTOR DISK hole ⑧, mount the ROTOR with the two screws ③.
4) Insert the connector ⑩.
5) While aligning the CYLINDER EARTH ASS'Y ② protuberance with the chassis hole ⑨, mount it with the screw ①.
6) Referring to 5-4-1 in this SUPPLEMENT, attach the LOAD RACK and the special washer. It is needed that the LOAD RACK is to be set correctly to the LOAD GEAR T.

Note 1: Use a torque driver (VHJ-0014) for mounting the STATOR ⑥ and the ROTOR ④. Set fastening torque to 3kg-cm.

Note 2: When the drum unit has been replaced, perform a tape path adjustment as instructed in 6-4. and perform a CH-1/CH-2 switching position adjustment of the servo circuit.

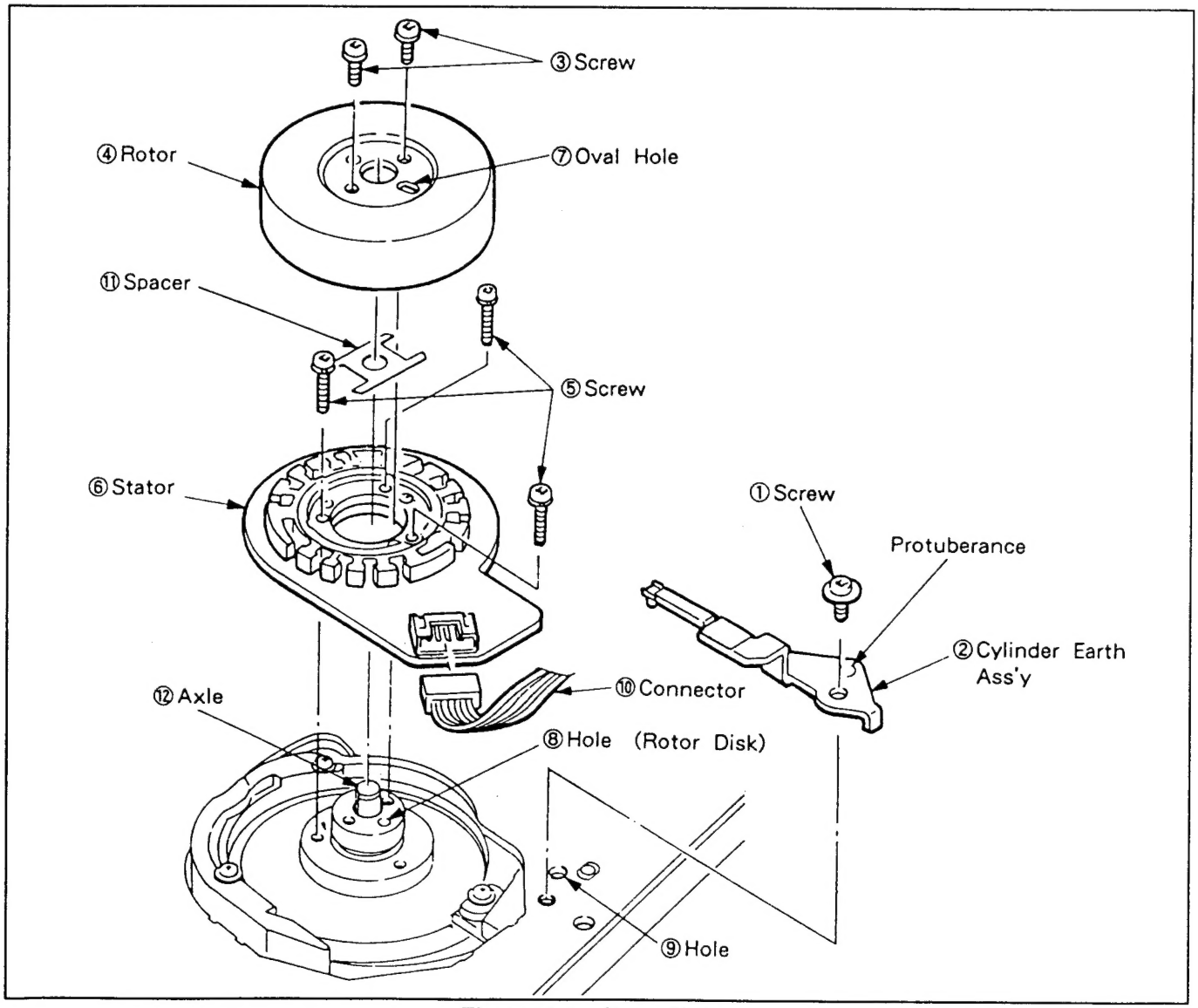


Fig. 5-11-1. Drum Motor

5-11-3. Upper Drum (Upper Cylinder)

In some models, as shown in Fig. 5-11-9, the structure of the drum (cylinder) may differ from that of the conventional drum. To replace this new upper drum, refer to the following.

1. Removal

1) Desolder the head terminal pins ① and the rotary transformer terminal pins ②, and remove the cylinder PWB ③.
2) Remove the two screws ④ and remove the upper drum ⑤ vertically.

2. Remounting

1) Check that there are no scratches, dusts, etc. on the sides of the flywheel ⑥ and upper drum ⑤ that are to be attached together.
2) While making sure not to bend the rotary transformer terminal pins ②, attach the upper drum ⑤ and flywheel ⑥ of the lower drum ⑦ together. At this time, adjust the hole ⑨ near the 2N2P ⑧ printed on the top side of the upper drum ⑤ to the screw holes ⑪ on the same side as the A mark ⑩ of the lower drum ⑦. (Be careful not to attach the video head in the opposite position as the video signal cannot be recorded and played back.)
3) Place the cylinder PWB ③ on the upper drum ⑤. Do not solder the head terminal pins ① and rotary transformer terminal pins ② yet.
4) Insert the two screws ④ into holes ⑨ and ⑫ and tighten them to secure the upper drum ⑤.
5) Solder the head terminal pins ① and rotary transformer terminal pins ② onto the cylinder PWB ③.

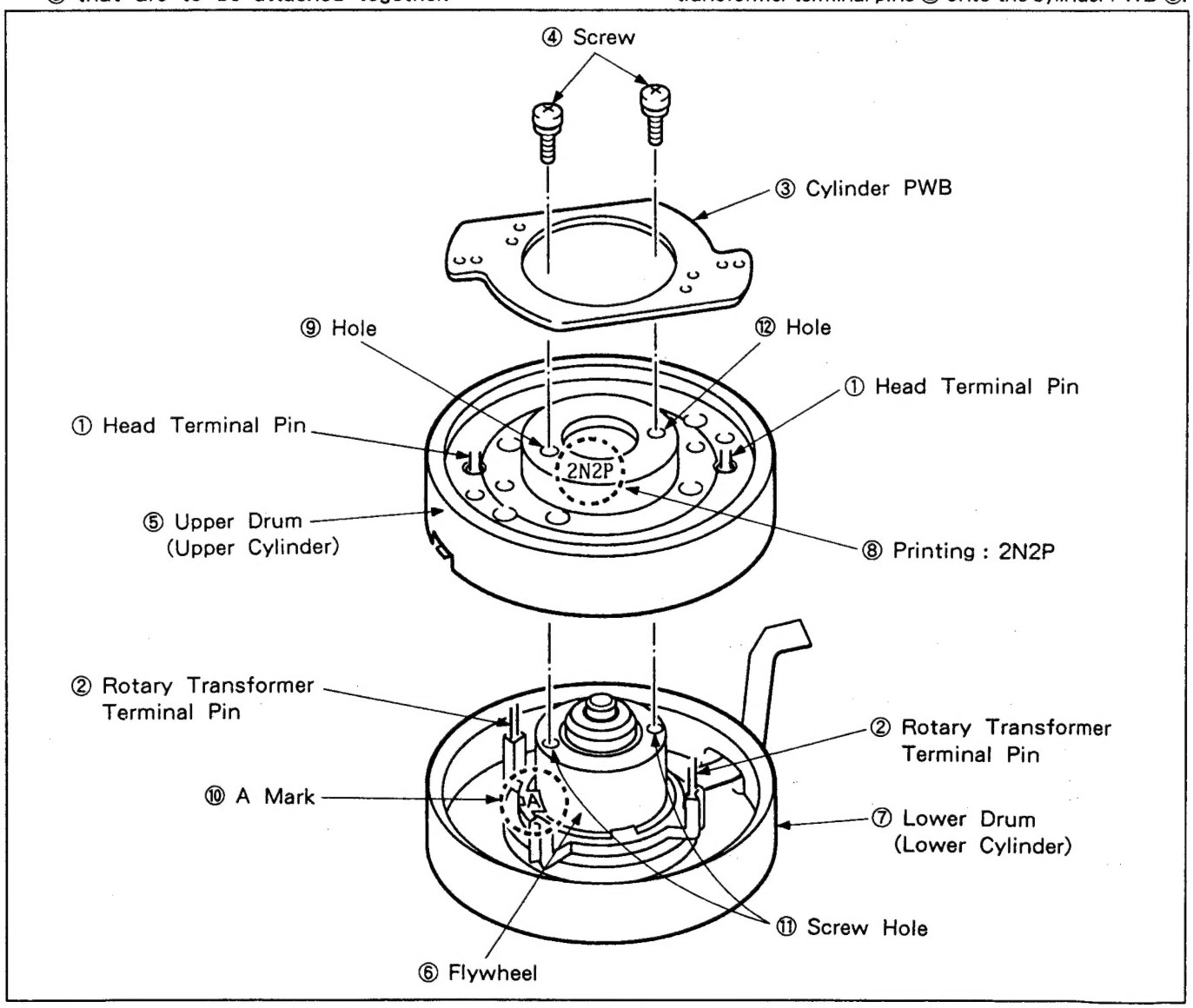


Fig. 5-11-9.

5-13. AUTO HEAD CLEANER MECHANISM (See. Fig. 5-13-1 • Fig. 5-13-2 • Fig. 5-13-3)

1. Removal

Note: • Do not hold the ROLLER CLEANER ASS'Y ① by bare hand. Use tweezers and gloves not soiled with grease or dust, etc.
• When the cleaning function deteriorates and replacing only ROLLER CLEANER ASS'Y ①, there is no need to perform item 4).

1) Make sure that the ROLLER CLEANER ASS'Y ① is not pressed against a drum (cylinder).
2) Remove the PRE-AMP UNIT and the PRE-AMP BRACKET.
3) Remove screw ②, then lift up and remove the BRACKET CLEANER ASS'Y ③.
4) With the BRACKET CLEANER ASS'Y ③ is fixed by finger, turn the LEVER CLEANER ASS'Y ④ 35° to 40° to clockwise, then lift up and remove.
5) Remove the stop washer ⑤, then remove the ROLLER CLEANER ASS'Y ①.

2. Remounting

1) Mount the ROLLER CLEANER ASS'Y ① and the stop washer ⑤ to the axle ⑥ of LEVER CLEANER ASS'Y.
Mount the ROLLER CLEANER ASS'Y ① so that the mark shown in Fig. 5-13-2 is up side. If the mark is down side, noise may occur.
2) Mount the SPRING COIL ⑧ and the LEVER CLEANER ASS'Y ④ to the axle ⑦ of BRACKET CLEANER ASS'Y. At this time, hook the SPRING COIL ⑧ to the hole ⑨ of the LEVER CLEANER ASS'Y and the bent part ⑩ of the BRACKET CLEANER ASS'Y. "A part" of the LEVER CLEANER ASS'Y should be under "B part" of the BRACKET CLEANER ASS'Y.
3) Fix the BRACKET CLEANER ASS'Y ③ on screw hole ⑫ by screw ②. Before fasten screw ②, insert hole ⑪ of the BRACKET CLEANER ASS'Y to axle ⑯, axle ⑦ to hole ⑬ to match positions. Pin ⑭ of the LEVER CLEANER ASS'Y should be run along the circumference of the MAIN CAM ⑮ not to be came off.
4) The upper side of the lower drum should be within approx. 2mm from the lower side of the ROLLER CLEANER ASS'Y as shown in Fig. 5-13-3.
5) Mount the PRE-AMP BRACKET and the PRE-AMP UNIT.

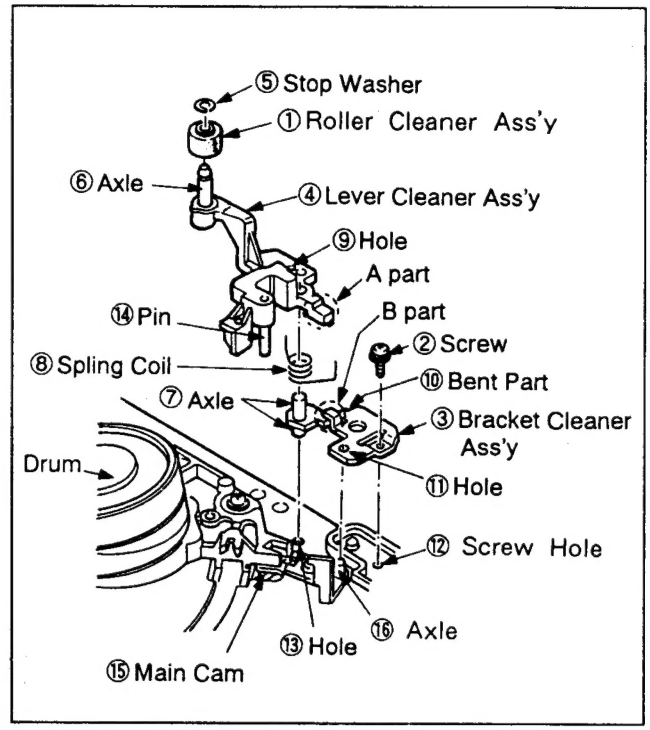


Fig. 5-13-1

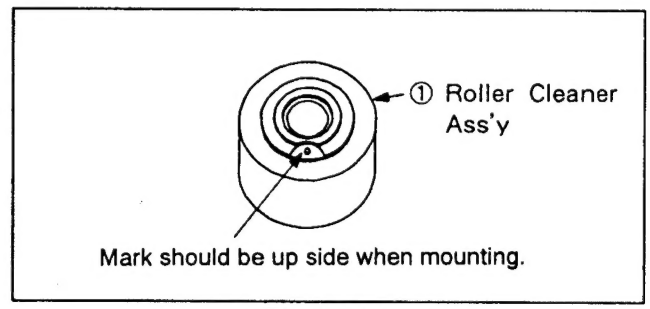


Fig. 5-13-2

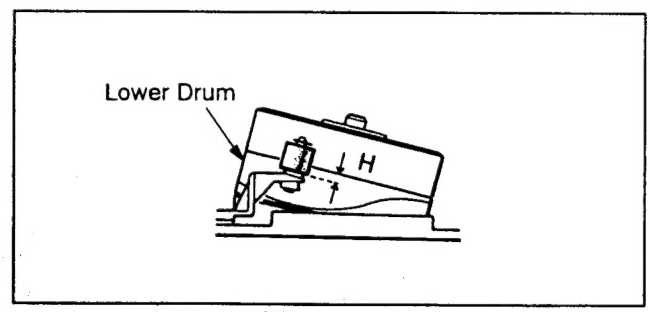


Fig. 5-13-3